

Hypertext marks in \LaTeX

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1 Documentation overview for `hyperref`

The documentation for package `hyperref` consists of several files:

Manual The **USER MANUAL** (also available as HTML).

README The **README** file (also available as text file). Here information is collected that is not yet in the manual: new features, package compatibility, limitations, known problems, ...

ChangeLog This file records the version history (also available as text file).

Options This file provides a short option summary.

Bookmark talk, slides Slides for the talk “PDF information and navigation elements with `hyperref`, `pdfTeX` and `thumbpdf`” at Euro \TeX 1999.

Bookmark talk, paper The paper version of the talk.

Source code documentation:

`hyperref.dtx` This is the source code documentation for `hyperref` (this file).

`backref.dtx` “Back referencing from bibliographical citations”

`nameref.dtx` “Section name references in \LaTeX ”

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3 File hycheck.tex

Many commands of L^AT_EX or other packages cannot be overloaded, but have to be redefined by hyperref directly. If these commands change in newer versions, these changes are not noticed by hyperref. With this test file this situation can be checked. It defines the command `\checkcommand` that is more powerful than L^AT_EX's `\CheckCommand`, because it takes `\DeclareRobustCommand` and optional parameters better into account.

```
1 \langle *check\rangle
2 \documentclass{article}
3 \makeatletter
```

`\checklatex` Optional argument: release date of L^AT_EX.

```
4 \newcommand*{\checklatex}[1] [] {%
5   \typeout{}%
6   \typeout{* Format: 'LaTeX2e' #1}%
7   \typeout{\space\space Loaded: '\fmtname' \fmtversion}%
8 }%
```

`\checkpackage` The argument of `\checkpackage` is the package name without extension optionally followed by a release date.

```
9 \newcommand*{\checkpackage}[1] {%
10  \def\HyC@package{#1}%
11  \let\HyC@date\@empty
12  \@ifnextchar[\HyC@getDate\HyC@checkPackage
13 }
```

`\HyC@getDate` The release date is scanned.

```
14 \def\HyC@getDate[#1] {%
15  \def\HyC@date{#1}%
16  \HyC@checkPackage
17 }
```

`\HyC@checkPackage`

```
18 \def\HyC@checkPackage{%
19  \typeout{}%
20  \begingroup
21    \edef\x{\endgroup
22      \noexpand\RequirePackage{\HyC@package}%
23      \ifx\HyC@date\@empty\relax\else[\HyC@date]\fi%
24    }%
25  \x
26  \typeout{}%
27  \typeout{%
28    * Package '\HyC@package'%
29    \ifx\HyC@date\@empty
30      \else
31        \space\HyC@date
32      \fi
33  }%
34  \@ifundefined{ver@\HyC@package.sty}{%
35  }{%
36    \typeout{%
37      \space\space Loaded: '\HyC@package' %
38      \csname ver@\HyC@package.sty\endcsname
39    }%
40  }%
41 }
```

`\checkcommand` The macro `\checkcommand` parses the next tokens as a \LaTeX definition and compares this definition with the current meaning of that command.

```

42 \newcommand*{\checkcommand}[1]{%
43   \begingroup
44   \ifx\long#1\relax
45     \expandafter\HyC@checklong
46   \else
47     \def\HyC@defcmd{#1}%
48     \expandafter\let\expandafter\HyC@next
49       \csname HyC@\expandafter\@gobble\string#1\endcsname
50     \expandafter\HyC@checkcommand
51   \fi
52 }
```

`\HyC@checklong` The definition command `\def` or `\edef` is read.

```

53 \def\HyC@checklong#1{%
54   \def\HyC@defcmd{\long#1}%
55   \expandafter\let\expandafter\HyC@next
56     \csname HyC@\expandafter\@gobble\string#1\endcsname
57   \HyC@checkcommand
58 }
```

`\HyC@checkcommand` The optional star of \LaTeX 's definitions is parsed.

```

59 \def\HyC@checkcommand{%
60   \ifx\HyC@next\relax
61     \PackageError{hycheck}{%
62       Unknown command '\expandafter\strip@prefix\meaning\HyC@cmd'%
63     }\@ehd
64     \expandafter\endinput
65   \fi
66   \@ifstar{%
67     \def\HyC@star{*}%
68     \HyC@check
69   }{%
70     \let\HyC@star\@empty
71     \HyC@check
72   }%
73 }
```

`\HyC@check` The macro `\HyC@check` reads the definition command.

```

74 \def\HyC@check#1{%
75   \def\HyC@cmd{#1}%
76   \let\HyC@org@cmd#1%
77   \let#1\relax
78   \let\HyC@param\@empty
79   \HyC@Toks{}%
80   \let\HyC@org@optcmd\HyC@noValue
81   \let\HyC@org@robustcmd\HyC@noValue
82   \let\HyC@org@robustoptcmd\HyC@noValue
83   \HyC@next
84 }
```

`\HyC@noValue`

```

85 \def\HyC@noValue{NoValue}
```

`\HyC@newcommand` The code for `\newcommand`.


```

86 \def\HyC@newcommand{%
87   \let\HyC@@cmd\HyC@cmd
88   \@ifnextchar[\HyC@nc@opt\HyC@nc@noopt
89 }

```

`\HyC@Toks` A register for storing the default value of an optional argument.

```

90 \newtoks\HyC@Toks

```

`\HyC@nc@noopt` This macro `\HyC@nc@noopt` is called, if the parser has reached the definition text.

```

91 \long\def\HyC@nc@noopt#1{%
92   \edef\x{%
93     \expandafter\noexpand\HyC@defcmd
94     \HyC@star
95     \expandafter\noexpand\HyC@cmd
96     \HyC@param\the\HyC@Toks
97   }%
98   \x{#1}%
99   \HyC@doCheck
100 }

```

`\HyC@nc@opt` This macro scans the first optional argument of a L^AT_EX definition (number of arguments).

```

101 \def\HyC@nc@opt[#1]{%
102   \def\HyC@param{[#1]}%
103   \@ifnextchar[\HyC@nc@default\HyC@nc@noopt
104 }

```

`\HyC@nc@default` Macro `\HyC@nc@default` scans the default for an optional argument.

```

105 \def\HyC@nc@default[#1]{%
106   \HyC@Toks={[#1]}%
107   \edef\HyC@optcmd{%
108     \expandafter\noexpand
109     \csname\expandafter\string\HyC@@cmd\endcsname
110   }%
111   \expandafter\let\expandafter\HyC@org@optcmd\HyC@optcmd
112   \HyC@nc@noopt
113 }

```

`\HyC@DeclareRobustCommand` `\DeclareRobustCommand{\cmd}` makes the command `\cmd` robust, that then calls `\cmd_` with an space at the end of the command name, defined by `\newcommand`. Therefore the further parsing is done by `\HyC@nc@opt` or `\HyC@nc@noopt` of the `\HyC@newcommand` chain.

```

114 \def\HyC@DeclareRobustCommand{%
115   \edef\HyC@robustcmd{%
116     \expandafter\noexpand
117     \csname\expandafter\expandafter\expandafter\@gobble
118     \expandafter\string\HyC@cmd\space\endcsname
119   }%
120   \expandafter\let\expandafter\HyC@org@robustcmd\HyC@robustcmd
121   \expandafter\let\HyC@robustcmd\relax
122   \let\HyC@@cmd\HyC@robustcmd
123   \@ifnextchar[\HyC@nc@opt\HyC@nc@noopt
124 }

```

`\HyC@def` The parameter text of `\def` or `\edef` is stored in the token register `\HyC@Toks`.

```

\HyC@edef
125 \def\HyC@def#1{%
126   \HyC@Toks={#1}%

```

```

127 \HyC@nc@noopt
128 }
129 \let\HyC@edef\HyC@def

```

`\HyC@doCheck` This command performs the checks and prints the result.

```

130 \def\HyC@doCheck{%
131 \typeout{* Checking '\HyC@string\HyC@cmd':}%
132 \HyC@checkItem{cmd}%
133 \HyC@checkItem{robustcmd}%
134 \HyC@checkItem{optcmd}%
135 \HyC@checkItem{robustoptcmd}%
136 \endgroup
137 }

```

`\HyC@checkItem` A single check.

```

138 \def\HyC@checkItem#1{%
139 \expandafter\ifx\csname HyC@org@#1\endcsname\HyC@noValue
140 \else
141 \expandafter\expandafter\expandafter\ifx
142 \csname HyC@#1\expandafter\endcsname
143 \csname HyC@org@#1\endcsname
144 \expandafter\HyC@checkOk\csname HyC@#1\endcsname
145 \else
146 \expandafter\HyC@checkFailed
147 \csname HyC@#1\expandafter\endcsname
148 \csname HyC@org@#1\endcsname
149 \fi
150 \fi
151 }

```

`\HyC@string` Some shorthands.

`\HyC@meaning`

```

152 \def\HyC@string#1{\expandafter\string#1}
153 \def\HyC@meaning#1{\expandafter\meaning#1}

```

`\HyC@checkOk` The result, if the check succeeds.

```

154 \def\HyC@checkOk#1{%
155 \typeout{\space\space'\HyC@string#1' ok.}%
156 }

```

`\HyC@checkFailed` The result, if the check fails.

```

157 \def\HyC@checkFailed#1#2{%
158 \typeout{\space\space'\HyC@string#1' failed.}%
159 \typeout{\space\space* original: \meaning#2}%
160 \typeout{\space\space* expected: \HyC@meaning#1}%
161 }

162 % *****
163 </check>
164 <*package>

```

4 Package options and setup

4.1 Save catcodes

There are many packages that change the standard catcodes.

First we save the original meaning of ‘ and = in the token register \toks@, because we need the two characters in the macros \Hy@SetCatcodes and \Hy@RestoreCatcodes.

```

165 \begingroup
166 \makeother\‘%
167 \makeother\=%
168 \edef\x{%
169   \edef\noexpand\x{%
170     \endgroup
171     \noexpand\toks@{%
172       \catcode 96=\noexpand\the\catcode'\noexpand\‘\relax
173       \catcode 61=\noexpand\the\catcode'\noexpand\=\relax
174     }%
175   }%
176   \noexpand\x
177 }%
178 \x
179 \makeother\‘
180 \makeother\=

```

\Hy@SetCatcodes

```

181 \def\Hy@SetCatcodes{%
182   \makeother\‘%
183   \makeother\=%
184   \catcode'\$=3 %
185   \catcode'\&=4 %
186   \catcode'\^=7 %
187   \catcode'\_ =8 %
188   \makeother\| %
189   \makeother\: %
190   \makeother\ ( %
191   \makeother\) %
192   \makeother\[ %
193   \makeother\] %
194   \makeother\/ %
195   \makeother\! %
196   \makeother\< %
197   \makeother\> %
198   \makeother\. %
199   \makeother\; %
200   \makeother\+ %
201   \makeother\- %
202   \makeother\" %
203   \makeother\' %
204 }

```

\Hy@RestoreCatcodes

```

205 \begingroup
206 \def\x#1{\catcode'\noexpand#1=\the\catcode'#1\relax}%
207 \xdef\Hy@RestoreCatcodes{%
208   \the\toks@
209   \x\$%
210   \x\&%
211   \x\^%
212   \x\_ %
213   \x\| %
214   \x\: %
215   \x\ ( %

```

```

216 \x\)%
217 \x\[%
218 \x\]%
219 \x\/%
220 \x\!%
221 \x\<%
222 \x\>%
223 \x\.%
224 \x\;%
225 \x\+%
226 \x\-%
227 \x\"%
228 \x\'%
229 }%
230 \endgroup

```

```
231 \Hy@SetCatcodes
```

It needs the December 95 release of L^AT_EX, because it uses `\protected@write`, and it defines commands in options; and the page setup internal code changed at that point. It'll probably break with the later releases!

```

232 \RequirePackage{keyval}[1997/11/10]
233 \RequirePackage{ifpdf}[2006/02/20]
234 \RequirePackage{ifvtex}
235 \RequirePackage{ifxetex}[2006/08/21]
236 \RequirePackage{hycolor}
237 \def\Hy@Warning#1{\PackageWarning{hyperref}{#1}}
238 \def\Hy@WarningNoLine#1{\PackageWarningNoLine{hyperref}{#1}}
239 \def\Hy@Info#1{\PackageInfo{hyperref}{#1}}

```

4.2 Compatibility with format dumps

`\AfterBeginDocument` For use with pre-compiled formats, created using the `ldump` package, there needs to be 2 hooks for adding material delayed until `\begin{document}`. These are called `\AfterBeginDocument` and `\AtBeginDocument`. If `ldump` is not loaded, then a single hook suffices for normal L^AT_EX processing.

The default definition of `\AfterBeginDocument` cannot be done by `\let` because of problems with `xypic`.

```

240 \@ifundefined{AfterBeginDocument}{%
241   \def\AfterBeginDocument{\AtBeginDocument}%
242 }{}%

```

4.3 Switches

```

243 \newif\ifHy@typexml
244 \newif\ifHy@activeanchor
245 \newif\ifHy@backref
246 \newif\ifHy@bookmarks
247 \newif\ifHy@bookmarksnumbered
248 \newif\ifHy@bookmarksopen
249 \newif\ifHy@breaklinks
250 \newif\ifHy@centerwindow
251 \newif\ifHy@CJKbookmarks
252 \newif\ifHy@colorlinks
253 \newif\ifHy@draft
254 \let\Hy@finaltrue\Hy@draftfalse
255 \let\Hy@finalfalse\Hy@drafttrue

```

```

256 \newif\ifHy@escapeform
257 \newif\ifHy@figures
258 \newif\ifHy@fitwindow
259 \newif\ifHy@frenchlinks
260 \newif\ifHy@hyperfootnotes
261 \newif\ifHy@hyperindex
262 \newif\ifHy@hypertextnames
263 \newif\ifHy@implicit
264 \newif\ifHy@linktocpage
265 \newif\ifHy@menubar
266 \newif\ifHy@naturalnames
267 \newif\ifHy@nesting
268 \newif\ifHy@newwindowset
269 \newif\ifHy@newwindow
270 \newif\ifHy@ocgcolorlinks
271 \newif\ifHy@pageanchor
272 \newif\ifHy@pagelabels
273 \newif\ifHy@pdfpagehidden
274 \newif\ifHy@pdfstring
275 \newif\ifHy@plainpages
276 \newif\ifHy@psize
277 \newif\ifHy@raiselinks
278 \newif\ifHy@seminarslides
279 \newif\ifHy@setpagesize
280 \newif\ifHy@texht
281 \newif\ifHy@toolbar
282 \newif\ifHy@unicode
283 \newif\ifHy@usetitle
284 \newif\ifHy@verbose
285 \newif\ifHy@windowui
286 \newif\ifHy@displaydoctitle
287 \newif\ifHy@pdfa

```

Defaults for the switches are now set.

```

288 \Hy@backreffalse
289 \Hy@bookmarksnumberedfalse
290 \Hy@bookmarksopenfalse
291 \Hy@bookmarkstrue
292 \Hy@breaklinksfalse
293 \Hy@centerwindowfalse
294 \Hy@CJKbookmarksfalse
295 \Hy@escapeformfalse
296 \Hy@figuresfalse
297 \Hy@fitwindowfalse
298 \Hy@hyperfootnotetrue
299 \Hy@hyperindextrue
300 \Hy@hypertextnametrue
301 \Hy@implicittrue
302 \Hy@linktocpagefalse
303 \Hy@menubartrue
304 \Hy@naturalnamesfalse
305 \Hy@nestingfalse
306 \Hy@newwindowsetfalse
307 \Hy@newwindowfalse
308 \Hy@pageanchortrue
309 \Hy@pagelabelstrue
310 \Hy@pdfpagehiddenfalse
311 \Hy@pdfstringfalse

```

```

312 \Hy@plainpagesfalse
313 \Hy@raiselinksfalse
314 \Hy@setpagesizetrue
315 \Hy@texhtfalse
316 \Hy@toolbartrue
317 \Hy@typexmlfalse
318 \Hy@unicodetrue
319 \Hy@usetitlefalse
320 \Hy@verbosefalse
321 \Hy@windowuitrue
322 \Hy@displaydoctitlefalse
323 \Hy@pdfafalse

```

5 Common help macros

`\Hy@StepCount`

```

324 \def\Hy@StepCount#1{\advance#1 by 1 }%

```

`\Hy@GlobalStepCount`

```

325 \def\Hy@GlobalStepCount#1{\global\advance#1 by 1 }%

326 \newdimen\@linkdim
327 \let\Hy@driver\@empty
328 \let\MaybeStopEarly\relax
329 \newcount\Hy@linkcounter
330 \newcount\Hy@pagecounter
331 \Hy@linkcounter0
332 \Hy@pagecounter0

```

5.1 Macros for recursions

`\Hy@ReturnAfterElseFi` The commands `\Hy@ReturnAfterElseFi` and `\Hy@ReturnAfterFi` avoid a too deep
`\Hy@ReturnAfterFi` `\if`-nesting especially for recursive macros.

```

333 \long\def\Hy@ReturnAfterElseFi#1\else#2\fi{\fi#1}
334 \long\def\Hy@ReturnAfterFi#1\fi{\fi#1}

335 \let\Hy@ReturnEnd\@empty
336 \long\def\Hy@ReturnAfterFiFiEnd#1\fi#2\Hy@ReturnEnd{\fi\fi#1}
337 \long\def\Hy@ReturnAfterElseFiFiEnd#1\else#2\Hy@ReturnEnd{\fi\fi#1}

```

5.2 Babel's protection of shorthand characters

`\Hy@safe@activetrue` Babel's switch setting commands cannot be used directly, because they can be undefined if
`\Hy@safe@activesfalse` babel is not loaded.

```

338 \def\Hy@safe@activetrue{\csname @safe@activetrue\endcsname}
339 \def\Hy@safe@activesfalse{\csname @safe@activesfalse\endcsname}

```

5.3 Coordinate transformations

At some places numbers in pdf units are expected (eg: FitBH, ...). The following macros perform the transformation from TeX units (pt) to PDF units (bp).

`\hypercalcbp` The user macro `\hypercalcbp` can be used, for example, inside option values:
`pdfstartview={FitBH \hypercalcbp{\paperheight-\topmargin-1in}}`

- It cannot be used inside `\usepackage`, because LaTeX expands the options before package `hyperref` is loaded and `\hypercalcbp` is defined.
- With e-TeX extensions an expandable implementation is very easy; `\hypercalcbp` can be used everywhere and is expanded at use.
- Without e-TeX's features `\hypercalcbp` cannot be implemented expandable (practically) and have to be supported by `\hypercalcbpdef`. Limitations:
 - Works only in options that use `\hypercalcbpdef` (currently only `pdfstartview`).
 - For calculations package `calc` has to be loaded.
 - The expansion of the argument is done at definition time.

Example (T_EX):

```

\usepackage{calc}
\usepackage[...]{hyperref}
\hypersetup{
  pdfstartview={FitBH \hypercalcbp{\paperheight-\topmargin-1in
    -\headheight-\headsep}
}

\hypercalcbp
340 \begingroup\expandafter\expandafter\expandafter\endgroup
341 \expandafter\ifx\csname dimexpr\endcsname\relax
342   \def\hypercalcbpdef#1#2{%
343     \begingroup
344       \toks@{}%
345       \HyCal@scan#2\hypercalcbp\@nil
346       \expandafter\endgroup
347       \expandafter\def\expandafter#1\expandafter{\the\toks@}%
348   }%
349   \def\HyCal@scan#1\hypercalcbp#2\@nil{%
350     \toks@\expandafter{\the\toks@ #1}%
351     \ifx\#2\%
352       \else
353         \Hy@ReturnAfterFi{%
354           \HyCal@do#2\@nil
355         }%
356       \fi
357     }%
358     \def\HyCal@do#1#2\@nil{%
359       \@ifpackageloaded{calc}{-}{%
360         \Hy@Warning{%
361           For calculations \string\hypercalcbp\space needs\MessageBreak
362           package calc or e-TeX%
363         }%
364       }%
365       \setlength{\dimen@}{#1}%
366       \setlength{\dimen@}{0.99626401\dimen@}%
367       \edef\x{%
368         \toks@{%
369           \the\toks@
370           \strip@pt\dimen@
371         }%
372       }\x
373       \HyCal@scan#2\@nil

```

```

374 }%
375 \else
376 \def\hypercalcbp#1{%
377 \strip@pt\dimexpr 0.99626401\dimexpr #1\relax\relax
378 }%
379 \def\hypercalcbpdef{\def}%
380 \fi

```

6 Dealing with PDF strings

The PDF string stuff done by Heiko Oberdiek.

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Naming convention: All internal commands that are only needed by `\pdfstringdef` are prefixed with `\HyPsd@`.

6.1 Description of PDF strings

The PDF specification defines several places to hold text strings (bookmark names, document information, text annotations, etc.). The PDF strings have following properties:

- They are surrounded by parentheses. The hexadecimal form is not supported.
- Like PostScript language strings they use the same escaping mechanism:

<code>\\</code>	the backslash itself
<code>\), \((</code>	unbalanced parentheses
<code>\n, \r, \t, \b, \f</code>	special white space escape sequences
<code>\ddd</code>	octal character code <i>ddd</i>
- Strings are stored either in `PDFDocEncoding`, which is a superset of `ISOLatin1` and is compatible with Unicode with character codes below 256, or in Unicode.

6.2 Definition of `\pdfstringdef`

The central macro for dealing with PDF strings is `\pdfstringdef`. It defines a command `#1` to be the result of the conversion from the string in `#2` to a legal `PDFDocEncoded` string. Currently the definition is global, but this can be changed in the future.

Important: In \TeX 's view PDF strings are written to a file and are expanded only in its mouth. Stomach commands that cannot be expanded further aren't executed, they are written verbatim. But the PDF reader that reads such a string isn't a \TeX interpreter!

The macro `\pdfstringdef` consists of three main parts:

1. Preprocessing. Here the expansion is prepared. The encoding is set and many commands are redefined, so that they work appropriate.
2. Expansion. The \TeX string is expanded the first time to get a PDF string.
3. Postprocessing. The result of the expansion is checked and converted to the final form.

`\pdfstringdef` `\pdfstringdef` works on the tokens in `#2` and converts them to a PDF string as far as possible:

- The result should obey the rules of the PDF specification for strings.
- The string can safely processed by \TeX , because the tokens have only catcodes 10 until 12.

The result is stored in the command token given in #1.

```
381 \def\pdfstringdef#1#2{%
```

Many redefinitions are needed, so all the work is done in a group.

```
382 \begingroup
```

6.2.1 Preprocessing

Octal escape sequences. To avoid problems with eight bit or non printable characters, the octal escape notation is supported. So most glyphs in the encoding definitions for PD1 and PU produce these octal escape sequences. All three octal digits have to be used:

- Wrong results are avoided, if digits follow that are not part of the octal sequence.
- Macros rely on the fact that the octal sequences always consist of three digits (vtex driver, Unicode support).

The escape sequences start with a backslash. By `\string` it will be printed. Therefore it is ensured that the \TeX escape character indeed prints as a normal backslash. Eventually this line can be removed, because this is standard \LaTeX behaviour.

```
383 \escapechar'\%
```

From the view of \TeX a octal sequence consists of the command tokens `\0` until `\3` and two digits. For saving tokens `\0`, `\1`, `\2`, and `\3` are directly used without a preceding `\string` in the glyph definitions. This is done here locally by defining the `\0` until `\3` commands. So the user can use octal escape sequences directly, the disadvantage is that a previous definition of this short commands does not apply.

```
384 \edef\0{\string\0}%
```

```
385 \edef\1{\string\1}%
```

```
386 \edef\2{\string\2}%
```

```
387 \edef\3{\string\3}%
```

Setting font encoding. The unicode encoding uses `\8` and `\9` as marker for the higher byte. `\8` is an abbreviation for the higher bytes 0 until 7 that can be expressed by one digit. `\8` will be converted to `\00`. However `\9` only marks the next three digits as higher byte and will be removed later.

The encoding is set by `\enc@update` for optimizing reasons.

```
388 \ifHy@unicode
```

```
389 \edef\8{\string\8}%
```

```
390 \edef\9{\string\9}%
```

```
391 \fontencoding{PU}%
```

```
392 \HyPsd@UTFviii
```

```
393 \def\ifpdfstringunicode##1##2{##1}%
```

```
394 \else
```

```
395 \fontencoding{PD1}%
```

```
396 \def\ifpdfstringunicode##1##2{##2}%
```

```
397 \fi
```

```
398 \enc@update
```

Internal encoding commands. `\pdfstringdef` interpretes text strings which are not allowed to contain mathematical stuff. The text glyph commands will produce a warning, if called in math mode. But this warning disturbs while expanding. Therefore we check for math mode here, before `\@inmathwarn` will be disabled (see below).

```
399 \@inmathwarn\pdfstringdef
```

If a glyph is used, that isn't in the PD1/PU encoding there will be an infinite error loop, because the NFSS encoding stuff have to be expanded unprotected (`\edef`), so that the assignments of `\@changed@cmd` don't take place. To patch this behaviour I only found `\@inmathwarn` as a usable hook. While an `\edef` a warning message by `\@inmathwarn` or `\TextSymbolUnavailable` cannot be give out, so `\@inmathwarn` should be disabled. And with the help of it the assignments in `\@changed@cmd` can easily be caught (see below).

```
400 \let\@inmathwarn\HyPsd@inmathwarn
```

Unknown composite characters are built with `\add@accent`, so it is redefined to provide a warning.

```
401 \let\add@accent\HyPsd@add@accent
```

Commands that don't use NFSS directly. There are several commands that prints characters in the printable ASCII area that don't obey the NFSS, so they have to be redefined here.

```
402 \let\{\textbraceleft
403 \let\}\textbraceright
404 \let\\textbackslash
405 \let\#\textnumbersign
406 \let\$\textdollar
407 \let\%\textpercent
408 \let\&\textampersand
409 % \let\~\textasciitilde
410 \let\_ \textunderscore
411 \let\textparagraph
412 \let\ldots\textellipsis
413 \let\dots\textellipsis
```

Newline `\newline` or `\\` do not work in bookmarks, in text annotations they should expand to `\r`. In pdf strings `\\` stands for a backslash. Therefore the commands are disabled now. The user can redefine them for a result what he want:

backslash: `\pdfstringdefDisableCommands{\let\\textbackslash}`

new line: `\pdfstringdefDisableCommands{\let\\textCR}`

disabled: `\pdfstringdefDisableCommands{\let\\empty}`

At any case, however, the optional argument or the star cannot be scanned in a 100% sure manner.

```
414 \def\{\pdfstringdefWarn\\}%
415 \def\newline{\pdfstringdefWarn\newline}%
```

Logos. Because the box shifting used in the \TeX logo does not work while writing to a file, the standard \TeX logos are redefined.

```
416 \def\TeX{\TeX}%
417 \def\LaTeX{La\TeX}%
418 \def\LaTeXe{LaTeX2e}%
419 \def\eTeX{e-\TeX}%
420 \def\SliTeX{Sli\TeX}%
421 \def\MF{Metafont}%
422 \def\MP{Metapost}%
```

Standard font commands. Because font changes do not work, the standard font switching commands are disabled.

```

423 \let\emph\@firstofone
424 \let\textnormal\@firstofone
425 \let\textrm\@firstofone
426 \let\textsf\@firstofone
427 \let\texttt\@firstofone
428 \let\textbf\@firstofone
429 \let\textmd\@firstofone
430 \let\textit\@firstofone
431 \let\textsc\@firstofone
432 \let\textsl\@firstofone
433 \let\textup\@firstofone
434 \let\normalfont\@empty
435 \let\rmfamily\@empty
436 \let\sffamily\@empty
437 \let\ttfamily\@empty
438 \let\bfseries\@empty
439 \let\mdseries\@empty
440 \let\itshape\@empty
441 \let\scshape\@empty
442 \let\slshape\@empty
443 \let\upshape\@empty
444 \let\em\@empty
445 \let\rm\@empty
446 \let\Huge\@empty
447 \let\LARGE\@empty
448 \let\Large\@empty
449 \let\footnotesize\@empty
450 \let\huge\@empty
451 \let\large\@empty
452 \let\normalsize\@empty
453 \let\scriptsize\@empty
454 \let\small\@empty
455 \let\tiny\@empty
456 \let\mathversion\@gobble
457 \let\phantom\@gobble
458 \let\vphantom\@gobble
459 \let\hphantom\@gobble

```

Package color.

```

460 \def\textcolor##1##{\@secondoftwo}%

```

Upper- and lowercase.

```

461 \def\MakeUppercase{\MakeUppercaseIsNotSupportedInPdfStrings}%
462 \def\MakeLowercase{\MakeLowercaseIsNotSupportedInPdfStrings}%

```

Package babel. Wherever “naturalnames” is used, disable \textlatin (from Babel 3.6k). Thanks to Felix Neubauer (Email: Felix.Neubauer@gmx.net).

```

463 \let\textlatin\@firstofone
464 \@ifundefined{language@group}{\{%
465 \csname HyPsd@babel@language@group\endcsname
466 }%
467 \HyPsd@GreekPatch

```

```

468 \let\@safe@activetrue\relax
469 \let\@safe@activesfalse\relax

```

Disable \cyr, used in russianb.ldf.

```

470 \let\cyr\relax

```

Redefine \es@roman, used in spanish.ldf.

```

471 \let\es@roman\@Roman

```

Package german.

```

472 \let\glqq\textglqq
473 \let\grqq\textgrqq
474 \let\glq\textglq
475 \let\grq\textgrq
476 \let\flqq\textflqq
477 \let\frqq\textfrqq
478 \let\flq\textflq
479 \let\frq\textfrq

```

Package french. The support is deferred, because it needs \GenericError to be disabled (see below).

Package FrenchPro. This package uses:

```

\if@mid@expandable{not fully expandable code}{fully expandable code}
480 \let\if@mid@expandable\@firstoftwo

```

AMS classes.

```

481 \HyPsd@AMSclassfix

```

Redefinition of \hspace \hspace don't work in bookmarks, the following fix tries to set a space if the argument is a positive length.

```

482 \let\hspace\HyPsd@hspace

```

Commands of referencing and indexing systems. Some L^AT_EX commands that are legal in \section commands have to be disabled here.

```

483 \let\label\@gobble
484 \let\index\@gobble
485 \let\glossary\@gobble
486 \let\href\@secondoftwo
487 \let\@mkboth\@gobbletwo

```

The \ref and \pageref is much more complicate because of their star form.

```

488 \let\ref\HyPsd@ref
489 \let\pageref\HyPsd@pageref
490 \let\nameref\HyPsd@nameref
491 \let\autoref\HyPsd@autoref

```

Miscellaneous commands.

```

492 \let\leavevmode\@empty
493 \let\mbox\@empty

```

\halign causes error messages because of the template character #.

```

494 \def\halign{\pdfstringdefWarn\halign\@gobble}%
495 \let\ignorespaces\HyPsd@ignorespaces

```

Patch for cjk bookmarks.

```
496 \ifHy@CJKbookmarks
497 \HyPsd@CJKhook
498 \fi
```

User hook. The switch `\Hy@pdfstring` is turned on. So user commands can detect that they are processed not to be typeset within \TeX 's stomach, but to be expanded by the mouth to give a PDF string. At this place before interpreting the string in #2 additional redefinitions can be added by the hook `\pdfstringdefPreHook`.

The position in the middle of the redefinitions is a compromise: The user should be able to provide his own (perhaps better) redefinitions, but some commands should have their original meaning, because they can be used in the hook (`\bgroup`, or `\@protected@testopt`, and `\@ifnextchar` for `\renewcommand`).

```
499 \Hy@pdfstringtrue
500 \pdfstringdefPreHook
```

Spaces. For checking the token of the string, spaces must be masked, because they cannot be caught by undelimited arguments.

```
501 \HyPsd@LetUnexpandableSpace\space
502 \HyPsd@LetUnexpandableSpace\ %
503 \HyPsd@LetUnexpandableSpace~%
504 \HyPsd@LetUnexpandableSpace\nobreakspace
```

Package xspace.

```
505 \@ifundefined{@xspace}{%
506 \let\xspace\HyPsd@ITALCORR
507 }{%
508 \let\xspace\HyPsd@XSPACE
509 }%
510 \let\/\HyPsd@ITALCORR
511 \let\bgroup\/%
512 \let\egroup\/%
```

Redefinitions of miscellaneous commands. Hyphenation does not make sense.

```
513 \let\discretionary\@gobbletwo
\@ifstar is defined in  $\text{\LaTeX}$  as follows:
```

```
\def\@ifstar#1{\@ifnextchar *{\@firstoftwo{#1}}}
```

`\@ifnextchar` doesn't work, because it uses stomach commands like `\let` and `\futurelet`. But it doesn't break. Whereas `\@firstoftwo{#1}` gives an error message because `\@firstoftwo` misses its second argument.

A mimicry of `\@ifnextchar` only with expandable commands would be very extensive and the result would be only an approximation. So here a cheaper solution follows in order to get rid of the error message at least:

```
514 \def\@ifnextchar{\HyPsd@ifnextchar\@ifnextchar}%
515 \def\kernel@ifnextchar{\HyPsd@ifnextchar\kernel@ifnextchar}%
516 \def\new@ifnextchar{\HyPsd@ifnextchar\new@ifnextchar}%
517 \let\@protected@testopt\HyPsd@protected@testopt
```

Support for package 'xargs':

```
518 \let\@protected@testopt@xargs\HyPsd@protected@testopt
```

6.2.2 Expansion

There are several possibilities to expand tokens within \LaTeX :

`\protected@edef`: The weakest form isn't usable, because it does not expand the font encoding commands. They are made robust and protect themselves.

`\csname`: First the string is expanded within a `\csname` and `\endcsname`. Then the command name is converted to characters with catcode 12 by `\string` and the first escape character removed by `\@gobble`. This method has the great *advantage* that stomach tokens that aren't allowed in PDF strings are detected by \TeX and reported as errors in order to force the user to write correct things. So he get no wrong results by forgetting the proofreading of his text. But the *disadvantage* is that old wrong code cannot be processed without errors. Mainly the error message is very cryptic and for the normal user hard to understand. \TeX provides no way to catch the error caused by `\csname` or allows to support the user with a descriptive error message. Therefore the experienced user had to enable this behaviour by an option `exactdef` in previous versions less or equal 6.50.

`\edef` This version uses this standard form for expansion. It is stronger than \LaTeX 's `\protected@edef`. So the font encoding mechanism works and the glyph commands are converted to the correct tokens for PDF strings with the definitions of the PD1 encoding. Because the protecting mechanism of \LaTeX doesn't work within an `\edef`, there are situations thinkable where code can break. For example, assignments and definitions aren't performed and so undefined command errors or argument parsing errors can occur. But this is only a compatibility problem with old texts. Now there are possibilities to write code that gives correct PDF strings (see `\texorpdfstring`). In the most cases unexpandable commands and tokens (math shift, grouping characters) remains. They don't cause an error like with `\csname`. However a PDF reader isn't \TeX , so these tokens are viewed verbatim. So this version detects them now, and removes them with an descriptive warning for the user. As additional features xspace support is possible and grouping characters can be used without problems, because they are removed silently.

Generic messages. While expanding via `\xdef` the `\Generic...` messages don't work and causes problems (error messages, invalid .out file). So they are disabled while expanding and removed silently, because a user warning would be too expensive (memory and runtime, `\pdfstringdef` is slow enough).

```
519 \begingroup
520 \let\GenericError\@gobblefour
521 \let\GenericWarning\@gobbletwo
522 \let\GenericInfo\@gobbletwo
```

Package french. This fix only works, if `\GenericError` is disabled.

```
523 \ifx\nofrenchguillemets\@undefined
524 \else
525 \nofrenchguillemets
526 \fi
```

Definition commands and expansion. Redefining the defining commands (see sec. 6.5.10). The original meaning of `\xdef` is saved in `\Hy@temp`.

```
527 \let\Hy@temp\xdef
528 \let\def\HyPsd@DefCommand
529 \let\gdef\HyPsd@DefCommand
```

```

530      \let\edef\HyPsd@DefCommand
531      \let\xdef\HyPsd@DefCommand
532      \let\futurelet\HyPsd@LetCommand
533      \let\let\HyPsd@LetCommand
534      \Hy@temp#1{#2}%
535      \endgroup

```

6.2.3 Postprocessing

If the string is empty time can be saved by omitting the postprocessing process.

```

536      \ifx#1\@empty
537      \else

```

Protecting spaces and removing grouping characters. In order to check the tokens we must separate them. This will be done with \TeX 's argument parsing. With this method we must the following item takes into account, that makes makes things a litte more complicate:

- \TeX does not accept a space as an undelimited argument, it cancels space tokens while looking for an undelimited argument. Therefore we must protect the spaces now.
- An argument can be a single token or a group of many tokens. And within curly braces tokens aren't find by \TeX 's argument scanning process. Third curly braces as grouping characters cannot be expanded further, so they don't vanish by the string expansion above. So these characters with catcode 1 and 2 are removed in the following and replaced by an marker for the xspace support.
- \TeX silently removes the outmost pair of braces of an argument. To prevent this on unwanted places, in the following the character | is appended to the string to make an outer brace to an inner one.

First the top level spaces are protected by replacing. Then the string is scanned to detect token groups. Each token group will now be space protected and again scanned for another token groups.

```

538      \HyPsd@ProtectSpaces#1%
539      \let\HyPsd@String\@empty
540      \expandafter\HyPsd@RemoveBraces\expandafter{#1|}%
541      \global\let#1\HyPsd@String

```

Check tokens. After removing the spaces and the grouping characters the string now should only consists of the following tokens/catcodes:

- 0 command names with start with an escape character.
- 3 math shift
- 4 alignment tabs
- 6 parameter, but this is unlikely.
- 7 superscript
- 8 subscript
- 11 letter
- 12 other
- 13 commands that are active characters.

After $\text{\HyPsd@CheckCatcodes}$ the command \HyPsd@RemoveMask is reused to remove the group protection character |. This character is needed to ensure that the string at least consists of one token if $\text{\HyPsd@CheckCatcodes}$ is called.

Because of internal local assignments and tabulars group braces are used.

```

542 \let\HyPsd@SPACEOPTI\relax
543 {%
544 \let\HyPsd@String\@empty
545 \expandafter\HyPsd@CheckCatcodes#1\HyPsd@End
546 \global\let#1\HyPsd@String
547 }%
548 \expandafter\HyPsd@RemoveMask\expandafter
549 |\expandafter\@empty#1\HyPsd@End#1%

```

\HyPsd@CheckCatcodes should no have removed the tokens with catcode 3, 4, 7, and 8. Because a parameter token (6) would cause to many errors before, there should now be only tokens with catcodes 11 or 12. So I think there is no need for a safety step like:

```
\xdef#1{\expandafter\strip@prefix\meaning#1}%
```

Looking for wrong glyphs. The case that glyphs aren't defined in the PD1 encoding is caught above in such a way, that the glyph name and a marker is inserted into the string. Now we can safely scan the string for this marker and provide a descriptive warning.

```

550 \expandafter\HyPsd@Subst\expandafter{\HyPsd@GLYPHERR}{\relax}#1%
551 \let\HyPsd@String\@empty
552 \expandafter\HyPsd@GlyphProcess#1\relax\@empty
553 \global\let#1\HyPsd@String

```

Backslash. The double backslash disturbs parsing octal sequences, for example in a string like abc\\051 the sequence \051 is detected although the second \ belongs to the first backslash.

```
554 \HyPsd@StringSubst{\}\{\textbackslash}#1%
```

Spaces. All spaces have already the form \040. The last postprocessing step will be an optimizing of the spaces, so we already introduce already the necessary command \HyPsd@SPACEOPTI. But first it is defined to be \relax in order to prevent a too early expansion by an \edef. Secondly a \relax serves as a marker for a token that is detected by \xspace.

The code of frenchb.1df can produce an additional space before \guillemotright, because \lastskip and \unskip do not work. Therefore it is removed here.

```

555 \ifHy@unicode
556 \expandafter\HyPsd@StringSubst\csname 80\040\endcsname
557 \HyPsd@SPACEOPTI#1%
558 \edef\Hy@temp@A{\HyPsd@SPACEOPTI\HyPsd@SPACEOPTI\80\273}%
559 \expandafter\HyPsd@Subst\expandafter{\Hy@temp@A}%
560 {\HyPsd@SPACEOPTI\80\273}#1%
561 \else
562 \HyPsd@StringSubst{\040}\HyPsd@SPACEOPTI#1%
563 \expandafter\HyPsd@Subst\expandafter{%
564 \expandafter\HyPsd@SPACEOPTI\expandafter\HyPsd@SPACEOPTI
565 \string\273}{\HyPsd@SPACEOPTI\273}#1%
566 \fi

```

Right parenthesis. Also \xspace detects a right parenthesis. For the \xspace support and the following parenthesis check the different parenthesis notations), \), and \051 are converted to one type \) and before \HyPsd@empty with the meaning of \relax is introduced for \xspace. By redefining to \@empty \HyPsd@empty can easily removed later.


```

567 \ifHy@unicode
568 \HyPsd@StringSubst{\}){\80\051}#1%
569 \HyPsd@Subst){\80\051}#1%
570 \let\HyPsd@empty\relax
571 \expandafter\HyPsd@StringSubst\csname 80\051\endcsname
572 {\HyPsd@empty\80\051}#1%
573 \else
574 \HyPsd@StringSubst{\}){\051}#1%
575 \HyPsd@Subst){\051}#1%
576 \let\HyPsd@empty\relax
577 \HyPsd@StringSubst{\051}{\HyPsd@empty\string\})#1%
578 \fi

```

Support for package xspace. `\xspace` looks for the next token and decides if it expands to a space or not. Following tokens prevent its transformation to a space: Beginning and end of group, handled above by replacing by an italic correction, several punctuation marks, a closing parentheses, and several spaces.

Without package `xspace` there are tokens with catcode 11 and 12, `\HyPsd@empty` and `\HyPsd@SPACEOPTI`. With package `xspace` marker for the italic correction `\/` and `\xspace` come with. In the package `xspace` case the two markers are replaced by commands and an `\edef` performs the `\xspace` processing.

In the opposite of the original `\xspace` `\HyPsd@xspace` uses an argument instead of a `\futurelet`, so we have to provide such an argument, if `\HyPsd@xspace` comes last. Because `\HyPsd@Subst` with several equal tokens (`--`) needs a safe last token, in both cases the string gets an additional `\HyPsd@empty`.

```

579 \expandafter\HyPsd@Subst\expandafter{\}/\HyPsd@empty#1%
580 \@ifundefined{@xspace}{%
581 }{%
582 \let\HyPsd@xspace\relax
583 \expandafter\HyPsd@Subst\expandafter
584 {\HyPsd@XSPACE}\HyPsd@xspace#1%
585 \let\HyPsd@xspace\HyPsd@doxspace
586 }%
587 \xdef#1{#1\HyPsd@empty}%

```

Ligatures. \TeX forms ligatures in its stomach, but the PDF strings are treated only by \TeX 's mouth. The `PDFDocEncoding` contains some ligatures, but the current version 3 of the `AcrobatReader` lacks the `fi` and `fl` glyphs, and the Linux version lacks the `emdash` and `endash` glyphs. So the necessary code is provided here, but currently disabled, hoping that version 4 of the `AcrobatReader` is better. To break the ligatures the user can use an empty group, because it leads to an insertion of an `\HyPsd@empty`. If this ligature code will be enabled some day, then the italic correction should also break the ligatures. Currently this occurs only, if package `xspace` is loaded.

Since newer `AcrobatReader` versions now show the `en-` and `emdash` in a correct way (`AR7/Linux`, `AR8/Linux`), the substitution code for them is enabled starting with version 6.781.

```

588 \HyPsd@Subst{---}\textemdash#1%
589 \HyPsd@Subst{--}\textendash#1%
590 % \HyPsd@Subst{fi}\textfi#1%
591 % \HyPsd@Subst{fl}\textfl#1%
592 \HyPsd@Subst{!'}\texttexclamdown#1%
593 \HyPsd@Subst{?'}\textquestiondown#1%

```

With the next `\edef` we get rid of the token `\HyPsd@empty`.

```

594 \let\HyPsd@empty\@empty

```

Left parentheses. Left parentheses are now converted to safe forms to avoid problems with unmatched ones (\(with PDFDocEncoding, the octal sequence with Unicode.

An optimization is possible. Matched parentheses can be replaced by a () pair. But this code is removed to save TeX memory and time.

```
595 \ifHy@unicode
596 \HyPsd@StringSubst\(\textparenleft#1%
597 \HyPsd@Subst(\textparenleft#1%
598 \else
599 \HyPsd@StringSubst\({\050}#1%
600 \HyPsd@Subst({\050}#1%
601 \HyPsd@StringSubst{\050}{\string\()}#1%
602 \fi
```

Optimizing spaces. Spaces are often used, but they have a very long form \040. They are converted back to real spaces, but not all, so that no space follows after another. In the bookmark case several spaces are written to the .out file, but if the entries are read back, several spaces are merged to a single one.

With Unicode the spaces are replaced by their octal sequences.

```
603 \ifHy@unicode
604 \edef\HyPsd@SPACEOPTI{\80\040}%
605 \else
606 \let\HyPsd@SPACEOPTI\HyPsd@spaceopti
607 \fi
608 \xdef#1{#1\@empty}%
609 \fi
```

Converting to Unicode. At last the eight bit letters have to be converted to Unicode, the masks \8 and \9 are removed and the Unicode marker is added.

```
610 \endgroup
611 \begingroup
612 \ifHy@unicode
613 \HyPsd@ConvertToUnicode#1%
```

Try conversion back to PDFDocEncoding.

```
614 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
615 \ifundefined{StringEncodingConvertTest}{%
616 }{%
617 \EdefUnescapeString\HyPsd@temp#1%
618 \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
619 {utf16be}{pdfdoc}{%
620 \EdefEscapeString\HyPsd@temp\HyPsd@temp
621 \global\let#1\HyPsd@temp
622 \Hy@unicodedefalse
623 }{}%
624 }%
625 \fi
626 \fi
```

User hook. The hook \pdfstringdefPostHook can be used for the purpose to post-process the string further.

```
627 \pdfstringdefPostHook#1%
628 \endgroup
629 }
```

`\Hy@pdfstringdef`

```
630 \def\Hy@pdfstringdef#1#2{%
631   \pdfstringdef\Hy@gtemp{#2}%
632   \let#1\Hy@gtemp
633 }
```

6.3 Encodings

6.3.1 Workaround for package linguex

```
634 \@ifpackageloaded{linguex}{%
635   \let\HyLinguex@OrgB\b
636   \let\HyLinguex@OrgC\c
637   \let\HyLinguex@OrgD\d
638   \def\HyLinguex@Restore{%
639     \let\b\HyLinguex@OrgB
640     \let\c\HyLinguex@OrgC
641     \let\d\HyLinguex@OrgD
642   }%
643   \AtEndOfPackage{%
644     \pdfstringdefDisableCommands{%
645       \@ifundefined{oldb}{\let\b\oldb}%
646       \@ifundefined{oldc}{\let\c\oldc}%
647       \@ifundefined{oldd}{\let\d\oldd}%
648     }%
649   }%
650 }{%
651   \let\HyLinguex@Restore\relax
652 }%
```

6.3.2 PD1 encoding

The PD1 encoding implements the PDFDocEncoding for use with L^AT_EX 2_ε's NFSS. Because the informational strings are not set by T_EX's typesetting mechanism but for interpreting by the PDF reader, the glyphs of the PD1 encoding are implemented to be safely written to a file (PDF output file, .out file).

The PD1 encoding can be specified as an option of the 'fontenc' package or loaded here. It does not matter what font family is selected, as T_EX does not process it anyway. So use CM.

```
653 \@ifundefined{T@PD1}{%
654   \input{pd1enc.def}%
655   \HyLinguex@Restore
656 }{}
657 \DeclareFontFamily{PD1}{pdf}{}
658 \DeclareFontShape{PD1}{pdf}{m}{n}{ <-> cmr10 }{}
659 \DeclareFontSubstitution{PD1}{pdf}{m}{n}
```

6.3.3 PU encoding

The PU encoding implements the Unicode encoding for use with L^AT_EX's NFSS. Because of large memory requirements the encoding file for Unicode support is only loaded, if option unicode is specified as package option.

`\HyPsd@InitUnicode` Because the file puenc.def takes a lot of memory, the loading is defined in the macro `\HyPsd@InitUnicode` called by the package option unicode.

```
660 \def\HyPsd@InitUnicode{%
661   \@ifundefined{T@PU}{%
```

```

662 \input{puenc.def}%
663 \HyLinguex@Restore
664 }{}%
665 \DeclareFontFamily{PU}{pdf}{}%
666 \DeclareFontShape{PU}{pdf}{m}{n}{ <-> cmr10 }{}%
667 \DeclareFontSubstitution{PU}{pdf}{m}{n}%
668 \let\HyPsd@InitUnicode\relax
669 }

```

6.4 Additional user commands

6.4.1 `\texorpdfstring`

`\texorpdfstring` While expanding the string in `\pdfstringdef` the switch `\ifHy@pdfstring` is set. This is used by the full expandable macro `\texorpdfstring`. It expects two arguments, the first contains the string that will be set and processed by T_EX's stomach, the second contains the replacement for PDF strings.

```

670 \def\texorpdfstring{%
671   \ifHy@pdfstring
672     \expandafter\@secondoftwo
673   \else
674     \expandafter\@firstoftwo
675   \fi
676 }

```

6.4.2 Hooks for `\pdfstringdef`

`\pdfstringdefPreHook` Default definition of the hooks for `\pdfstringdef`. The construct `\@ifundefined` with `\pdfstringdefPostHook` `\let` is a little bit faster than `\providecommand`.

```

677 \@ifundefined{pdfstringdefPreHook}{%
678   \let\pdfstringdefPreHook\@empty
679 }{}
680 \@ifundefined{pdfstringdefPostHook}{%
681   \let\pdfstringdefPostHook\@gobble
682 }{}

```

`\pdfstringdefDisableCommands` In `\pdfstringdefPreHook` the user can add code that is executed before the string, that have to be converted by `\pdfstringdef`, is expanded. So replacements for problematic macros can be given. The code in `\pdfstringdefPreHook` should not be replaced perhaps by an `\renewcommand`, because a previous meaning gets lost.

Macro `\pdfstringdefDisableCommands` avoids this, because it reuses the old meaning of the hook and appends the new code to `\pdfstringdefPreHook`, e.g.:

```

\pdfstringdefDisableCommands{%
  \let~\textasciitilde
  \def\url{\pdfstringdefWarn\url}%
  \let\textcolor\@gobble
}%

```

In the argument of `\pdfstringdefDisableCommands` the character `@` can be used in command names. So it is easy to use useful L^AT_EX commands like `\@gobble` or `\@firstofone`.

```

683 \def\pdfstringdefDisableCommands{%
684   \begingroup
685     \makeatletter
686     \HyPsd@DisableCommands
687 }

```

`\HyPsd@DisableCommands`

```
688 \long\def\HyPsd@DisableCommands#1{%
689   \toks0=\expandafter\pdfstringdefPreHook}%
690   \toks1={#1}%
691   \xdef\pdfstringdefPreHook{\the\toks0 \the\toks1}%
692 \endgroup
693 }
```

`\pdfstringdefWarn` The purpose of `\pdfstringdefWarn` is to produce a warning message, so the user can see, that something can go wrong with the conversion to PDF strings.

The prefix `\<>-` is added to the token. `\noexpand` protects the probably undefined one during the first expansion step. Then `\HyPsd@CheckCatcodes` can detect the not allowed token, `\HyPsd@CatcodeWarning` prints a warning message, after `\HyPsd@RemovePrefix` has removed the prefix.

`\pdfstringdefWarn` is intended for document authors or package writers, examples for use can be seen in the definition of `\HyPsd@ifnextchar` or `\HyPsd@protected@testopt`.

```
694 \def\pdfstringdefWarn#1{%
695   \expandafter\noexpand\csname\<>-string#1\endcsname
696 }
```

6.5 Help macros for expansion

6.5.1 `\ignorespaces`

`\HyPsd@ignorespaces` With the help of a trick using `\romannumeral` the effect of `\ignorespaces` can be simulated a little, In a special case using an alphabetic constant `\romannumeral` eats an optional space. If the constant is zero, then the `\romannumeral` expression vanishes. The following macro uses this trick twice, thus `\HyPsd@ignorespaces` eats up to two following spaces.

```
697 \begingroup
698   \catcode0=12 %
699   \def\x{\endgroup
700     \def\HyPsd@ignorespaces{%
701       \romannumeral\expandafter'\expandafter^^@%
702       \romannumeral'^^@%
703     }%
704   }%
705 \x
```

6.5.2 Babel languages

```
706 \newif\ifHy@next

  Nothing to do for english.
707 \@ifundefined{danish@sh@"@sel}{-}{-}%
708   \def\HyPsd@babel@danish{%
709     \declare@shorthand{danish}{-}{-}%
710     \declare@shorthand{danish}{-}{-}%
711   }%
712 }
713 \@ifundefined{dutch@sh@"@sel}{-}{-}%
714   \def\HyPsd@babel@dutch{%
715     \declare@shorthand{dutch}{-}{-}%
716     \declare@shorthand{dutch}{-}{-}%
717   }%
718 }
```

```

719 \@ifundefined{finnish@sh@"@sel}{-}{%
720   \def\HyPsd@babel@finnish{%
721     \declare@shorthand{finnish}{-}{-}%
722   }%
723 }
724 \@ifundefined{french@sh@:"@sel}{-}{%
725   \def\HyPsd@babel@frenchb{%
726     \def\guill@spacing{ }%
727   }%
728 }
729 \@ifundefined{german@sh@"@sel}{-}{%
730   \def\HyPsd@babel@german{%
731     \declare@shorthand{german}{-f}{-f}%
732     \declare@shorthand{german}{-}{-}%
733     \declare@shorthand{german}{-~}{-}%
734   }%
735 }
736 \@ifundefined{macedonian@sh@"@sel}{-}{%
737   \def\HyPsd@babel@macedonian{%
738     \declare@shorthand{macedonian}{-}{-}%
739     \declare@shorthand{macedonian}{-~}{-}%
740   }%
741 }{-}
742 \@ifundefined{ngerman@sh@"@sel}{-}{%
743   \def\HyPsd@babel@ngerman{%
744     \declare@shorthand{ngerman}{-}{-}%
745     \declare@shorthand{ngerman}{-~}{-}%
746   }%
747 }
748 \@ifundefined{portuges@sh@"@sel}{-}{%
749   \def\HyPsd@babel@portuges{%
750     \declare@shorthand{portuges}{-}{-}%
751   }%
752 }
753 \@ifundefined{russian@sh@"@sel}{-}{%
754   \def\HyPsd@babel@russian{%
755     \declare@shorthand{russian}{-}{-}%
756     \declare@shorthand{russian}{-~}{-}%
757   }%
758 }
759 \@ifundefined{slovene@sh@"@sel}{-}{%
760   \def\HyPsd@babel@slovene{%
761     \declare@shorthand{slovene}{-}{-}%
762   }%
763 }

```

Nested quoting environments are not supported (<<, >>).

```

764 \@ifundefined{spanish@sh@>@sel}{-}{%
765   \def\HyPsd@babel@spanish{%
766     \declare@shorthand{spanish}{<<}{\guillemotleft}%
767     \declare@shorthand{spanish}{>>}{\guillemotright}%
768     \declare@shorthand{spanish}{=}{-}%
769     \declare@shorthand{spanish}{~}{-}%
770     \declare@shorthand{spanish}{!}{\textexclamdown}%
771     \declare@shorthand{spanish}{?}{\textquestiondown}%
772   }%
773 }
774 \@ifundefined{swedish@sh@"@sel}{-}{%

```

```

775 \def\HyPsd@babel@swedish{%
776   \declare@shorthand{swedish}{"}{|}%
777   \declare@shorthand{swedish}{"}{|}%
778 }%
779 }
780 \@ifundefined{ukrainian@sh@"@sel}{|}%
781 \def\HyPsd@babel@ukrainian{%
782   \declare@shorthand{ukrainian}{"}{|}%
783   \declare@shorthand{ukrainian}{"}{|}%
784 }%
785 }
786 \@ifundefined{usorbian@sh@"@sel}{|}%
787 \def\HyPsd@babel@usorbian{%
788   \declare@shorthand{usorbian}{"}{|}%
789   \declare@shorthand{usorbian}{"}{|}%
790 }%
791 }
792 \@ifundefined{greek@sh@\string~@sel}{|}%
793 \let\HyPsd@GreekPatch\empty
794 }{|}%
795 \def\HyPsd@GreekPatch{%
796   \let\greeknumeral\HyPsd@greeknumeral
797   \let\Greeknumeral\HyPsd@Greeknumeral
798 }%
799 }
800 \def\HyPsd@greeknumeral#1{%
801   \HyPsd@GreekNum\@firstoftwo{#1}%
802 }
803 \def\HyPsd@Greeknumeral#1{%
804   \HyPsd@GreekNum\@secondoftwo{#1}%
805 }
806 \def\HyPsd@GreekNum#1#2{%
807   \ifHy@unicode
808     \ifnum#2<\@one
809       \@arabic{#2}%
810     \else
811       \ifnum#2<1000000 %
812         \HyPsd@@GreekNum#1{#2}%
813       \else
814         \@arabic{#2}%
815       \fi
816     \fi
817   \else
818     \@arabic{#2}%
819   \fi
820 }
821 \def\HyPsd@@GreekNum#1#2{%
822   \ifnum#2<\@m
823     \ifnum#2<10 %
824       \expandafter\HyPsd@GreekNumI
825       \expandafter\@gobble\expandafter#1\number#2%
826     \else
827       \ifnum#2<100 %
828         \expandafter\HyPsd@GreekNumII
829         \expandafter\@gobble\expandafter#1\number#2%
830       \else
831         \expandafter\HyPsd@GreekNumIII

```

```

832         \expandafter\@gobble\expandafter#1\number#2%
833     \fi
834 \fi
835 \ifnum#2>\z@
836     \textnumeralsigngreek
837 \fi
838 \else
839     \ifnum#2<\@M
840         \expandafter\HyPsd@GreekNumIV\expandafter#1\number#2%
841     \else
842         \ifnum#2<100000 %
843             \expandafter\HyPsd@GreekNumV\expandafter#1\number#2%
844         \else
845             \expandafter\HyPsd@GreekNumVI\expandafter#1\number#2%
846         \fi
847     \fi
848 \fi
849 }
850 \def\HyPsd@GreekNumI#1#2#3{%
851     #1{%
852         \ifnum#3>\z@
853             \textnumeralsignlowergreek
854         \fi
855     }%
856     \expandafter#2%
857     \ifcase#3 %
858         {}{}%
859     \or\textalpha\textAlpha
860     \or\textbeta\textBeta
861     \or\textgamma\textGamma
862     \or\textdelta\textDelta
863     \or\textepsilon\textEpsilon
864     \or\textstigmagreek\textStigmagreek
865     \or\textzeta\textZeta
866     \or\texteta\textEta
867     \or\texttheta\textTheta
868     \else
869         {}{}%
870     \fi
871 }
872 \def\HyPsd@GreekNumII#1#2#3#4{%
873     #1{%
874         \ifnum#3>\z@
875             \textnumeralsignlowergreek
876         \fi
877     }%
878     \expandafter#2%
879     \ifcase#3 %
880         {}{}%
881     \or\textiota\textIota
882     \or\textkappa\textKappa
883     \or\textlambda\textLambda
884     \or\textmu\textMu
885     \or\textnu\textNu
886     \or\textxi\textXi
887     \or\textomicron\textOmicron
888     \or\textpi\textPi

```



```

889 \or\textkoppagreek\textKoppagreek
890 \else
891   {}{}%
892 \fi
893 \HyPsd@GreekNumI#1#2#4%
894 }
895 \def\HyPsd@GreekNumIII#1#2#3#4#5{%
896   #1{%
897     \ifnum#3>\z@
898       \textnumeralsignlowergreek
899     \fi
900   }%
901   \expandafter#2%
902   \ifcase#3 %
903     {}{}%
904   \or\textrho\textRho
905   \or\textsigma\textSigma
906   \or\texttau\textTau
907   \or\textupsilon\textUpsilon
908   \or\textphi\textPhi
909   \or\textchi\textChi
910   \or\textpsi\textPsi
911   \or\textomega\textOmega
912   \or\textsampigreek\textSampigreek
913   \else
914     {}{}%
915   \fi
916   \HyPsd@GreekNumII#1#2#4#5%
917 }
918 \def\HyPsd@GreekNumIV#1#2#3#4#5{%
919   \HyPsd@GreekNumI\@firstofone#1#2%
920   \HyPsd@@GreekNum#1{#3#4#5}%
921 }
922 \def\HyPsd@GreekNumV#1#2#3#4#5#6{%
923   \HyPsd@GreekNumII\@firstofone#1#2#3%
924   \HyPsd@@GreekNum#1{#4#5#6}%
925 }
926 \def\HyPsd@GreekNumVI#1#2#3#4#5#6#7{%
927   \HyPsd@GreekNumIII\@firstofone#1#2#3#4%
928   \HyPsd@@GreekNum#1{#5#6#7}%
929 }

```

6.5.3 CJK bookmarks

`\HyPsd@CJKhook` Some internal commands of package `cjk` are redefined to avoid error messages. For a rudimental support of CJK bookmarks the active characters are redefined so that they print themselves.

After preprocessing of Big5 encoded data the following string for a double-byte character is emitted:

```
^^7f<arg1>^^7f<arg2>^^7f
```

`<arg1>` is the first byte in the range (always $> 0x80$); `<arg2>` is the second byte in decimal notation ($\geq 0x40$).

```

930 \begingroup
931   \catcode"7F=\active
932   \toks@{%
933     \let\CJK@ignorespaces\empty

```

```

934 \def\CJK@char#1{\@gobbletwo}%
935 \let\CJK@charx\@gobblefour
936 \let\CJK@punctchar\@gobblefour
937 \def\CJK@punctcharx#1{\@gobblefour}%
938 \catcode"7F=\active
939 \def^^7f#1^^7f#2^^7f{%
940   \string #1\HyPsd@DecimalToOctal{#2}%
941 }%
942 % ... ?
943 \ifHy@unicode
944   \def\Hy@cjkpu{\80}%
945   \else
946     \let\Hy@cjkpu\@empty
947   \fi
948   \HyPsd@CJKActiveChars
949 }%
950 \count@=127 %
951 \@whilenum\count@<255 \do{%
952   \advance\count@ by 1 %
953   \lccode'\~=\count@
954   \lowercase{%
955     \toks@\expandafter{\the\toks@ ~}%
956   }%
957 }%
958 \toks@\expandafter{\the\toks@ !}%
959 \xdef\HyPsd@CJKhook{\the\toks@}%
960 \endgroup

```

`\HyPsd@CJKActiveChars` The macro `\HyPsd@CJKActiveChars` is only defined to limit the memory consumption of `\HyPsd@CJKhook`.

```

961 \def\HyPsd@CJKActiveChars#1{%
962   \ifx#1!%
963     \let\HyPsd@CJKActiveChars\relax
964   \else
965     \edef#1{\noexpand\Hy@cjkpu\string#1}%
966   \fi
967   \HyPsd@CJKActiveChars
968 }

```

`\HyPsd@DecimalToOctal` A character, given by the decimal number is converted to a PDF character.

```

969 \def\HyPsd@DecimalToOctal#1{%
970   \ifcase #1 %
971     \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
972     \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
973     \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
974     \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
975     \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
976     \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
977     \or 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
978     \or 8\or 9\or \072\or \073\or \074\or \075\or \076\or \077%
979     \or @\or A\or B\or C\or D\or E\or F\or G%
980     \or H\or I\or J\or K\or L\or M\or N\or O%
981     \or P\or Q\or R\or S\or T\or U\or V\or W%
982     \or X\or Y\or Z\or \133\or \134\or \135\or \136\or \137%
983     \or \140\or a\or b\or c\or d\or e\or f\or g%
984     \or h\or i\or j\or k\or l\or m\or n\or o%
985     \or p\or q\or r\or s\or t\or u\or v\or w%

```

```

986 \or x\or y\or z\or \173\or \174\or \175\or \176\or \177%
987 \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
988 \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
989 \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
990 \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
991 \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
992 \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
993 \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
994 \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
995 \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
996 \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
997 \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
998 \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
999 \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1000 \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1001 \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1002 \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1003 \fi
1004 }

```

6.5.4 \@inmathwarn-Patch

`\HyPsd@inmathwarn` The patch of `\@inmathwarn` is needed to get rid of the infinite error loop with glyphs of other encodings (see the explanation above). Potentially the patch is dangerous, if the code in `ltoutenc.dtx` changes. Checked with $\text{\LaTeX 2}_{\epsilon}$ versions [1998/06/01] and [1998/12/01]. I expect that versions below [1995/12/01] don't work.

To understand the patch easier, the original code of `\@current@cmd` and `\@changed@cmd` follows ($\text{\LaTeX 2}_{\epsilon}$ release [1998/12/01]). In the normal case `\pdfstringdef` is executed in a context where `\protect` has the meaning of `\@typesetprotect` (`=\relax`).

```

\def\@current@cmd#1{%
  \ifx\protect\@typeset@protect
    \@inmathwarn#1%
  \else
    \noexpand#1\expandafter\@gobble
  \fi}
\def\@changed@cmd#1#2{%
  \ifx\protect\@typeset@protect
    \@inmathwarn#1%
    \expandafter\ifx\csname\cf@encoding\string#1\endcsname\relax
      \expandafter\ifx\csname ?\string#1\endcsname\relax
        \expandafter\def\csname ?\string#1\endcsname{%
          \TextSymbolUnavailable#1%
        }%
      \fi
      \global\expandafter\let
        \csname\cf@encoding\string#1\expandafter\endcsname
        \csname ?\string#1\endcsname
    \fi
    \csname\cf@encoding\string#1%
      \expandafter\endcsname
  \else
    \noexpand#1%
  \fi}
\gdef\TextSymbolUnavailable#1{%
  \@latex@error{%
    Command \protect#1 unavailable in encoding \cf@encoding%

```

```

    }\@eha}
\def\@inmathwarn#1{%
  \ifmode
    \@latex@warning{Command \protect#1 invalid in math mode}%
  \fi}

1005 \def\HyPsd@inmathwarn#1#2{%
1006   \ifx#2\expandafter
1007     \expandafter\ifx\csname\cf@encoding\string#1\endcsname\relax
1008       \HyPsd@GLYPHERR
1009       \expandafter\@gobble\string#1%
1010       >%
1011       \expandafter\expandafter\expandafter\HyPsd@EndWithElse
1012     \else
1013       \expandafter\expandafter\expandafter\HyPsd@GobbleFiFi
1014     \fi
1015   \else
1016     \expandafter#2%
1017   \fi
1018 }
1019 \def\HyPsd@GobbleFiFi#1\fi#2\fi{}
1020 \def\HyPsd@EndWithElse#1\else\else{}

```

\HyPsd@add@accent

```

1021 \def\HyPsd@add@accent#1#2{%
1022   \HyPsd@GLYPHERR\expandafter\@gobble\string#1+\string#2>%
1023   #2%
1024 }%

```

6.5.5 Unexpandable spaces

\HyPsd@LetUnexpandableSpace In \HyPsd@@ProtectSpaces the space tokens are replaced by not expandable commands, that work like spaces:

- So they can caught by undelimited arguments.
- And they work in number, dimen, and skip assignments.

These properties are used in \HyPsd@CheckCatcodes.

```

1025 \def\HyPsd@LetUnexpandableSpace#1{%
1026   \expandafter\futurelet\expandafter#1\expandafter\@gobble\space\relax
1027 }

```

\HyPsd@UnexpandableSpace \HyPsd@UnexpandableSpace is used in \HyPsd@@ProtectSpaces. In \yPsd@@ProtectSpaces the space tokens are replaced by unexpandable commands \HyPsd@UnexpandableSpace, but that have the effect of spaces.

```

1028 \HyPsd@LetUnexpandableSpace\HyPsd@UnexpandableSpace

```

6.5.6 Marker for commands

\HyPsd@XSPACE Some commands and informations cannot be utilized before the string expansion and the checking process. Command names are filtered out, so we need another way to transport the information: An unusual # with catcode 12 marks the beginning of the extra information.

```

1029 \edef\HyPsd@XSPACE{\string#\string X}
1030 \edef\HyPsd@ITALCORR{\string#\string I}
1031 \edef\HyPsd@GLYPHERR{\string#\string G}

```

6.5.7 \hspace fix

\HyPsd@hspace

```
1032 \def\HyPsd@hspace#1{\HyPsd@@hspace#1*\END}
```

\HyPsd@@hspace \HyPsd@@hspace checks whether \hspace is called in its star form.

```
1033 \def\HyPsd@@hspace#1*#2\END{%
1034   \ifx\#2\%
1035     \HyPsd@hspacetest{#1}%
1036   \else
1037     \expandafter\HyPsd@hspacetest
1038   \fi
1039 }
```

\HyPsd@hspacetest \HyPsd@hspacetest replaces the \hspace by a space, if the length is greater than zero.

```
1040 \def\HyPsd@hspacetest#1{\ifdim#1>\z@\space\fi}
```

6.5.8 Fix for AMS classes

```
1041 \@ifundefined{tocsection}{%
1042   \let\HyPsd@AMSclassfix\relax
1043 }{%
1044   \def\HyPsd@AMSclassfix{%
1045     \let\tocpart\HyPsd@tocsection
1046     \let\tocchapter\HyPsd@tocsection
1047     \let\tocappendix\HyPsd@tocsection
1048     \let\tocsection\HyPsd@tocsection
1049     \let\tocsubsection\HyPsd@tocsection
1050     \let\tocsubsubsection\HyPsd@tocsection
1051     \let\tocparagraph\HyPsd@tocsection
1052   }%
1053   \def\HyPsd@tocsection#1#2#3{%
1054     \if @#2@\else\if @#1@\else#1 \fi#2. \fi
1055     #3%
1056   }%
1057 }
```

6.5.9 Reference commands

\HyPsd@ref Macro \HyPsd@ref calls the macro \HyPsd@@ref for star checking. The same methods like in \HyPsd@hspace is used.

```
1058 \def\HyPsd@ref#1{\HyPsd@@ref#1*\END}%
```

\HyPsd@@ref Macro \HyPsd@@ref checks if a star is present.

```
1059 \def\HyPsd@@ref#1*#2\END{%
1060   \ifx\#2\%
1061     \HyPsd@@@ref{#1}%
1062   \else
1063     \expandafter\HyPsd@@@ref
1064   \fi
1065 }
```

\HyPsd@@@ref \HyPsd@@@ref does the work and extracts the first argument.

```
1066 \def\HyPsd@@@ref#1{%
1067   \expandafter\ifx\csname r@#1\endcsname\relax
1068     ??%
```

```

1069 \else
1070   \expandafter\expandafter\expandafter
1071   \@car\csname r@#1\endcsname\@nil
1072 \fi
1073 }

\HyPsd@pageref Macro \HyPsd@pageref calls the macro \HyPsd@@pageref for star checking. The same
methods like in \HyPsd@hspace is used.
1074 \def\HyPsd@pageref#1{\HyPsd@@pageref#1*\END}

\HyPsd@@pageref Macro \HyPsd@@pageref checks if a star is present.
1075 \def\HyPsd@@pageref#1*#2\END{%
1076   \ifx\#2\%
1077     \HyPsd@@@pageref{#1}%
1078   \else
1079     \expandafter\HyPsd@@@pageref
1080   \fi
1081 }

\HyPsd@@@pageref \HyPsd@@@pageref does the work and extracts the second argument.
1082 \def\HyPsd@@@pageref#1{%
1083   \expandafter\ifx\csname r@#1\endcsname\relax
1084     ??%
1085   \else
1086     \expandafter\expandafter\expandafter\expandafter
1087     \expandafter\expandafter\expandafter\@car
1088     \expandafter\expandafter\expandafter\@gobble
1089     \csname r@#1\endcsname{}\@nil
1090   \fi
1091 }

\HyPsd@nameref Macro \HyPsd@nameref calls the macro \HyPsd@@nameref for star checking. The same
methods like in \HyPsd@hspace is used.
1092 \def\HyPsd@nameref#1{\HyPsd@@nameref#1*\END}

\HyPsd@@nameref Macro \HyPsd@@nameref checks if a star is present.
1093 \def\HyPsd@@nameref#1*#2\END{%
1094   \ifx\#2\%
1095     \HyPsd@@@nameref{#1}%
1096   \else
1097     \expandafter\HyPsd@@@nameref
1098   \fi
1099 }

\HyPsd@@@nameref \HyPsd@@@nameref does the work and extracts the third argument.
1100 \def\HyPsd@@@nameref#1{%
1101   \expandafter\ifx\csname r@#1\endcsname\relax
1102     ??%
1103   \else
1104     \expandafter\expandafter\expandafter\expandafter
1105     \expandafter\expandafter\expandafter\@car
1106     \expandafter\expandafter\expandafter\@gobbletwo
1107     \csname r@#1\endcsname{}\@nil
1108   \fi
1109 }

```

`\HyPsd@autoref` Macro `\HyPsd@autoref` calls the macro `\HyPsd@@autoref` for star checking. The same methods like in `\HyPsd@hspace` is used.

```
1110 \def\HyPsd@autoref#1{\HyPsd@@autoref#1*\END}
```

`\HyPsd@@autoref` Macro `\HyPsd@@autoref` checks if a star is present.

```
1111 \def\HyPsd@@autoref#1*#2\END{%
1112   \ifx\#2\%
1113     \HyPsd@@@autoref{#1}%
1114   \else
1115     \expandafter\HyPsd@@@autoref
1116   \fi
1117 }
```

`\HyPsd@@@autoref` `\HyPsd@@@autoref` does the work and extracts the second argument.

```
1118 \def\HyPsd@@@autoref#1{%
1119   \expandafter\ifx\csname r@#1\endcsname\relax
1120     ??%
1121   \else
1122     \expandafter\expandafter\expandafter\HyPsd@autorefname
1123       \csname r@#1\endcsname{}{}{}{}\@nil
1124     \expandafter\expandafter\expandafter
1125       \@car\csname r@#1\endcsname\@nil
1126   \fi
1127 }
```

`\HyPsd@autorefname` At least a basic definition for getting the `\autoref` name.

```
1128 \def\HyPsd@autorefname#1#2#3#4#5\@nil{%
1129   \ifx\#4\%
1130   \else
1131     \HyPsd@@autorefname#4.\@nil
1132   \fi
1133 }
```

`\HyPsd@@autorefname`

```
1134 \def\HyPsd@@autorefname#1.#2\@nil{%
1135   \@ifundefined{#1autorefname}{%
1136     \@ifundefined{#1name}{%
1137       }{%
1138         \csname#1name\endcsname\space
1139       }%
1140     }{%
1141       \csname#1autorefname\endcsname\space
1142     }%
1143 }
```

6.5.10 Redefining the defining commands

Definitions aren't allowed, because they aren't executed in an only expanding context. So the command to be defined isn't defined and can perhaps be undefined. This would causes TeX to stop with an error message. With a deep trick it is possible to define commands in such a context: `\csname` does the job, it defines the command to be `\relax`, if it has no meaning.

Active characters cannot be defined with this trick. It is possible to define all undefined active characters (perhaps that they have the meaning of `\relax`). To avoid side

effects this should be done in `\pdfstringdef` shortly before the `\xdef` job. But checking and defining all possible active characters of the full range (0 until 255) would take a while. `\pdfstringdef` is slow enough, so this isn't done.

`\HyPsd@DefCommand` and `\HyPsd@LetCommand` expands to the commands `\<def>-command` and `\<let>-command` with the meaning of `\def` and `\let`. So it is detected by `\HyPsd@CheckCatcodes` and the command name `\<def>-command` or `\<let>-command` should indicate a forbidden definition command.

The command to be defined is converted to a string and back to a command name with the help of `\csname`. If the command is already defined, `\noexpand` prevents a further expansion, even though the command would expand to legal stuff. If the command don't have the meaning of `\relax`, `\HyPsd@CheckCatcodes` will produce a warning. (The command itself can be legal, but the warning is legitimate because of the position after a defining command.)

The difference between `\HyPsd@DefCommand` and `\HyPsd@LetCommand` is that the first one also cancels this arguments, the parameter and definition text. The right side of the `\let` commands cannot be canceled with an undelimited parameter because of a possible space token after `\futurelet`.

To avoid unmached `\if...tokens`, the cases `\let\if...\iftrue` and `\let\if...\iffalse` are checked and ignored.

```
\HyPsd@DefCommand
\HyPsd@LetCommand 1144 \begingroup
1145   \def\x#1#2{%
1146     \endgroup
1147     \let#1\def
1148     \def\HyPsd@DefCommand##1##2##{%
1149       #1%
1150       \expandafter\noexpand
1151       \csname\expandafter@gobble\string##1\@empty\endcsname
1152       \@gobble
1153     }%
1154     \let#2\let
1155     \def\HyPsd@@LetCommand##1{%
1156       \expandafter\ifx\csname##1\expandafter\endcsname
1157         \csname iftrue\endcsname
1158         \pdfstringdefWarn\let
1159         \expandafter@gobble
1160       \else
1161         \expandafter\ifx\csname##1\expandafter\endcsname
1162           \csname iffalse\endcsname
1163           \pdfstringdefWarn\let
1164           \expandafter\expandafter\expandafter@gobble
1165         \else
1166           #2%
1167           \expandafter\noexpand
1168           \csname##1\expandafter\expandafter\expandafter\endcsname
1169         \fi
1170       \fi
1171     }%
1172   }%
1173   \expandafter\x\csname <def>-command\expandafter\endcsname
1174     \csname <let>-command\endcsname
1175   \def\HyPsd@LetCommand#1{%
1176     \expandafter\expandafter\expandafter\HyPsd@@LetCommand
1177     \expandafter\expandafter\expandafter{%
1178     \expandafter@gobble\string#1\@empty
```



```

1179 }%
1180 }

```

6.5.11 \ifnextchar

`\HyPsd@ifnextchar` In `\pdfstringdef \@ifnextchar` is disabled via a `\let` command to save time. First a warning message is given, then the three arguments are canceled. `\@ifnextchar` cannot work in a correct manner, because it uses `\futurelet`, but this is a stomach feature, that doesn't work in an expanding context. There are several variants of `\@ifnextchar`:

- `\@ifnextchar`
- `\kernel@ifnextchar`
- `\new@ifnextchar` from package `amsgen.sty` (bug report latex/3662).

```

1181 \def\HyPsd@ifnextchar#1{%
1182   \pdfstringdefWarn#1%
1183   \expandafter\@gobbletwo\@gobble
1184 }

```

6.5.12 \@protected@testoptifnextchar

`\HyPsd@protected@testopt` Macros with optional arguments doesn't work properly, because they call `\@ifnextchar` to detect the optional argument (see the explanation of `\HyPsd@ifnextchar`). But a warning, that `\@ifnextchar` doesn't work, doesn't help the user very much. Therefore `\@protected@testopt` is also disabled, because its first argument is the problematic macro with the optional argument and it is called before `\@ifnextchar`.

```

1185 \def\HyPsd@protected@testopt#1{%
1186   \pdfstringdefWarn#1%
1187   \@gobbletwo
1188 }

```

6.6 Help macros for postprocessing

6.6.1 Generic warning.

`\HyPsd@Warning` For several reasons `\space` is masked and does not have its normal meaning. But it is used in warning messages, so it is redefined locally:

```

1189 \def\HyPsd@Warning#1{%
1190   \begingroup
1191     \def\space{ }%
1192     \Hy@Warning{#1}%
1193   \endgroup
1194 }

```

6.6.2 Protecting spaces

```

1195 \RequirePackage{etexcmds}[2007/09/09]
1196 \ifetex@unexpanded
1197   \expandafter\@secondoftwo
1198 \else
1199   \expandafter\@firstoftwo
1200 \fi
1201 {%

```

`\HyPsd@ProtectSpaces` `\HyPsd@ProtectSpaces` calls with the expanded string `\HyPsd@@ProtectSpacesFi`. The expanded string is protected by `|` at the beginning and end of the expanded string.

Because of this there can be no group at the beginning or end of the string and grouping characters are not removed by the call of `\HyPsd@@ProtectSpacesFi`.

```

1202 \def\HyPsd@ProtectSpaces#1{%
1203   \iftrue
1204     \expandafter\HyPsd@@ProtectSpacesFi
1205     \expandafter|\expandafter\@empty#1| \HyPsd@End#1%
1206   \fi
1207 }%

```

`\HyPsd@@ProtectSpacesFi` The string can contain command tokens, so it is better to use an `\def` instead of an `\edef`.

```

1208 \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@End#3\fi{%
1209   \fi
1210   \ifx\scrollmode#2\scrollmode
1211     \HyPsd@RemoveMask#1\HyPsd@End#3%
1212   \else
1213     \gdef#3{#1\HyPsd@UnexpandableSpace#2}%
1214     \expandafter\HyPsd@@ProtectSpacesFi#3\HyPsd@End#3%
1215   \fi
1216 }%

```

Remove mask.

`\HyPsd@RemoveMask` `\HyPsd@RemoveMask` removes the protecting `|`. It is used by `\HyPsd@@ProtectSpacesFi` and by the code in `\pdfstringdef` that removes the grouping characters.

```

1217 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1218   \toks@{\expandafter{#1}}%
1219   \xdef#2{\the\toks@}%
1220 }%

1221 }{%
1222 \let\HyPsd@fi\fi
1223 \def\HyPsd@ProtectSpaces#1{%
1224   \xdef#1{%
1225     \iftrue
1226       \expandafter\HyPsd@@ProtectSpacesFi
1227       \expandafter|\expandafter\@empty#1| %
1228     \HyPsd@fi
1229   }%
1230   \expandafter\HyPsd@RemoveMask#1\HyPsd@End#1%
1231 }%
1232 \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@fi{%
1233   \fi
1234   \etex@unexpanded{#1}%
1235   \ifx\scrollmode#2\scrollmode
1236   \else
1237     \HyPsd@@ProtectSpacesFi\HyPsd@UnexpandableSpace#2%
1238   \HyPsd@fi
1239 }%
1240 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1241   \xdef#2{\etex@unexpanded\expandafter{#1}}%
1242 }%
1243 }

```

6.6.3 Remove grouping braces

`\HyPsd@RemoveBraces` #1 contains the expanded string, the result will be locally written in command `\HyPsd@String`.

```

1244 \def\HyPsd@RemoveBraces#1{%
1245   \ifx\scrollmode#1\scrollmode
1246   \else
1247     \HyPsd@@RemoveBracesFi#1\HyPsd@End{#1}%
1248   \fi
1249 }

```

`\HyPsd@@RemoveBraces` `\HyPsd@@RemoveBraces` is called with the expanded string, the end marked by `\HyPsd@End`, the expanded string again, but enclosed in braces and the string command. The first expanded string is scanned by the parameter text `#1#2`. By a comparison with the original form in `#3` we can decide whether `#1` is a single token or a group. To avoid the case that `#2` is a group, the string is extended by a `|` before.

While removing the grouping braces an italic correction marker is inserted for supporting package `xspace` and letting ligatures broken.

Because the string is already expanded, the `\if` commands should disappeared. So we can move some parts out of the argument of `\Hy@ReturnAfterFi`.

```

1250 \def\HyPsd@@RemoveBracesFi#1#2\HyPsd@End#3\fi{%
1251   \fi
1252   \def\Hy@temp@A{#1#2}%
1253   \def\Hy@temp@B{#3}%
1254   \ifx\Hy@temp@A\Hy@temp@B
1255     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1256       \HyPsd@String#1%
1257     }%
1258     \ifx\scrollmode#2\scrollmode
1259     \else
1260       \Hy@ReturnAfterFiFiEnd{%
1261         \HyPsd@RemoveBraces{#2}%
1262       }%
1263     \fi
1264   \else
1265     \def\Hy@temp@A{#1}%
1266     \HyPsd@AppendItalcorr\HyPsd@String
1267     \ifx\Hy@temp@A\@empty
1268       \Hy@ReturnAfterElseFiFiEnd{%
1269         \HyPsd@RemoveBraces{#2}%
1270       }%
1271     \else
1272       \HyPsd@ProtectSpaces\Hy@temp@A
1273       \HyPsd@AppendItalcorr\Hy@temp@A
1274       \Hy@ReturnAfterFiFiEnd{%
1275         \expandafter\HyPsd@RemoveBraces\expandafter
1276           {\Hy@temp@A#2}%
1277       }%
1278     \fi
1279   \fi
1280   \Hy@ReturnEnd
1281 }

```

`\HyPsd@AppendItalcorr` The string can contain commands yet, so it is better to use `\def` instead of a shorter `\edef`. The two help macros limit the count of `\expandafter`.

```

1282 \def\HyPsd@AppendItalcorr#1{%
1283   \expandafter\HyPsd@@AppendItalcorr\expandafter{/}#1%
1284 }
1285 \def\HyPsd@@AppendItalcorr#1#2{%
1286   \expandafter\def\expandafter#2\expandafter{#2#1}%
1287 }

```

6.6.4 Catcode check

Check catcodes.

`\HyPsd@CheckCatcodes` Because `\ifcat` expands its arguments, this is prevented by `\noexpand`. In case of command tokens and active characters `\ifcat` now sees a `\relax`. After protecting spaces and removing braces #1 should be a single token, no group of several tokens, nor an empty group. (So the `\expandafter\relax` between `\ifcat` and `\noexpand` is only for safety and it should be possible to remove it.)

`\protect` and `\relax` should be removed silently. But it is too dangerous and breaks some code giving them the meaning of `\@empty`. So commands with the meaning of `\protect` are removed here. (`\protect` should have the meaning of `\typeset@protect` that is equal to `\relax`).

```

1288 \def\HyPsd@CheckCatcodes#1#2\HyPsd@end{%
1289   \global\let\HyPsd@Rest\relax
1290   \ifcat\relax\noexpand#1\relax
1291     \ifx#1\protect
1292     \else
1293       \ifx#1\penalty
1294         \setbox\z@=\hbox{%
1295           \afterassignment\HyPsd@AfterCountRemove
1296           \count@=#2\HyPsd@end
1297         }%
1298       \else
1299         \ifx#1\kern
1300         \setbox\z@=\hbox{%
1301           \afterassignment\HyPsd@AfterDimenRemove
1302           \dimen@=#2\HyPsd@end
1303         }%
1304       \else
1305         \ifx#1\hskip
1306         \setbox\z@=\hbox{%
1307           \afterassignment\HyPsd@AfterSkipRemove
1308           \skip@=#2\HyPsd@end
1309         }%
1310       \else
1311         \HyPsd@CatcodeWarning{#1}%
1312       \fi
1313     \fi
1314   \fi
1315 \fi
1316 \else
1317   \ifcat#1A% letter
1318   \expandafter\def\expandafter\HyPsd@String\expandafter{%
1319     \HyPsd@String#1%
1320   }%
1321 \else
1322   \ifcat#1 % SPACE
1323   \expandafter\def\expandafter\HyPsd@String\expandafter{%
1324     \HyPsd@String\HyPsd@SPACEOPTI
1325   }%
1326 \else
1327   \ifcat$#1%
1328   \HyPsd@CatcodeWarning{math shift}%
1329 \else
1330   \ifcat&#1%
1331   \HyPsd@CatcodeWarning{alignment tab}%

```

```

1332         \else
1333             \ifcat^#1%
1334                 \HyPsd@CatcodeWarning{superscript}%
1335             \else
1336                 \ifcat_#1%
1337                     \HyPsd@CatcodeWarning{subscript}%
1338                 \else
1339                     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1340                         \HyPsd@String#1%
1341                     }%
1342                 \fi
1343             \fi
1344         \fi
1345     \fi
1346 \fi
1347 \fi
1348 \fi
1349 \ifx\HyPsd@Rest\relax
1350     \ifx\scrollmode#2\scrollmode
1351     \else
1352         \Hy@ReturnAfterFiFiEnd{%
1353             \HyPsd@CheckCatcodes#2\HyPsd@End
1354         }%
1355     \fi
1356 \else
1357     \ifx\HyPsd@Rest\@empty
1358     \else
1359         \Hy@ReturnAfterFiFiEnd{%
1360             \expandafter\HyPsd@CheckCatcodes\HyPsd@Rest\HyPsd@End
1361         }%
1362     \fi
1363 \fi
1364 \Hy@ReturnEnd
1365 }

```

Remove counts, dimens, skips.

\HyPsd@AfterCountRemove Counts like \penalty are removed silently.

```

1366 \def\HyPsd@AfterCountRemove#1\HyPsd@End{%
1367     \gdef\HyPsd@Rest{#1}%
1368 }

```

\HyPsd@AfterDimenRemove If the value of the dimen (\kern) is zero, it can be removed silently. All other values are difficult to interpret. Negative values do not work in bookmarks. Should positive values be removed or should they be replaced by space(s)? The following code replaces positive values greater than 1ex with a space and removes them else.

```

1369 \def\HyPsd@AfterDimenRemove#1\HyPsd@End{%
1370     \ifdim\ifx\HyPsd@String\@empty\z@\else\dimen@<1ex %
1371         \HyPsd@ReplaceSpaceWarning{\string\kern\space\the\dimen@}%
1372         \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
1373     \else
1374         \ifdim\dimen@=\z@
1375         \else
1376             \HyPsd@RemoveSpaceWarning{\string\kern\space\the\dimen@}%
1377         \fi
1378         \gdef\HyPsd@Rest{#1}%
1379     \fi

```

1380 }

`\HyPsd@AfterSkipRemove` The glue part of skips do not work in PDF strings and are ignored. Skips (`\hskip`), that are not zero, have the same interpreting problems like `dimens` (see above).

```
1381 \def\HyPsd@AfterSkipRemove#1\HyPsd@end{%
1382   \ifdim\ifx\HyPsd@String\@empty\z@else\skip@fi>1ex %
1383     \HyPsd@ReplaceSpaceWarning{\string\hskip\space\the\skip@}%
1384     \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
1385   \else
1386     \ifdim\skip@=\z@
1387     \else
1388       \HyPsd@RemoveSpaceWarning{\string\kern\space\the\skip@}%
1389     \fi
1390     \gdef\HyPsd@Rest{#1}%
1391   \fi
1392 }
```

Catcode warnings.

`\HyPsd@CatcodeWarning` `\HyPsd@CatcodeWarning` produces a warning for the user.

```
1393 \def\HyPsd@CatcodeWarning#1{%
1394   \HyPsd@Warning{%
1395     Token not allowed in a PDF string (%
1396     \ifHy@unicode
1397       Unicode%
1398     \else
1399       PDFDocEncoding%
1400     \fi
1401     ):%
1402     \MessageBreak removing ‘\HyPsd@RemoveCmdPrefix#1’%
1403   }%
1404 }
1405 \begingroup
1406   \catcode'\|=0 %
1407   \catcode'\|=12 %
1408   \gdef\HyPsd@RemoveCmdPrefix#1{%
1409     \expandafter\HyPsd@@RemoveCmdPrefix
1410     \string#1\@empty\<>-|\@empty|\@empty
1411   }%
1412   \gdef\HyPsd@@RemoveCmdPrefix#1\<>-#2|\@empty#3|\@empty{#1#2}%
1413 \endgroup
```

`\HyPsd@RemoveSpaceWarning`

```
1414 \def\HyPsd@RemoveSpaceWarning#1{%
1415   \HyPsd@Warning{%
1416     Token not allowed in a PDF string (%
1417     \ifHy@unicode
1418       Unicode%
1419     \else
1420       PDFDocEncoding%
1421     \fi
1422     ):%
1423     \MessageBreak #1\MessageBreak
1424     removed%
1425   }%
1426 }
```

\HyPsd@ReplaceSpaceWarning

```
1427 \def\HyPsd@ReplaceSpaceWarning#1{%
1428   \HyPsd@Warning{%
1429     Token not allowed in a PDF string (%)
1430     \ifHy@unicode
1431       Unicode%
1432     \else
1433       PDFDocEncoding%
1434     \fi
1435   }:%
1436   \MessageBreak #1\MessageBreak
1437   replaced by space%
1438 }%
1439 }
```

6.6.5 Check for wrong glyphs

A wrong glyph is marked with \relax, the glyph name follows, delimited by >. \@empty ends the string.

```
1440 \def\HyPsd@GlyphProcess#1\relax#2\@empty{%
1441   \expandafter\def\expandafter\HyPsd@String\expandafter{%
1442     \HyPsd@String#1%
1443   }%
1444   \ifx\#2\%
1445   \else
1446     \Hy@ReturnAfterFi{%
1447       \HyPsd@GlyphProcessWarning#2\@empty
1448     }%
1449   \fi
1450 }
1451 \def\HyPsd@GlyphProcessWarning#1>#2\@empty{%
1452   \HyPsd@@GlyphProcessWarning#1++>%
1453   \HyPsd@GlyphProcess#2\@empty
1454 }
1455 \def\HyPsd@@GlyphProcessWarning#1+#2+#3>{%
1456   \ifx\#2\%
1457     \HyPsd@Warning{%
1458       Glyph not defined in %
1459       P\ifHy@unicode U\else D1\fi\space encoding,\MessageBreak
1460       removing ‘\@backslashchar#1’%
1461     }%
1462   \else
1463     \HyPsd@Warning{%
1464       Composite letter ‘\@backslashchar#1+#2’\MessageBreak
1465       not defined in P\ifHy@unicode U\else D1\fi\space encoding,%
1466       \MessageBreak
1467       removing ‘\@backslashchar#1’%
1468     }%
1469   \fi
1470 }
```

Spaces.

\HyPsd@spaceopti In the string the spaces are represented by \HyPsd@spaceopti tokens. Within an \edef it prints itself as a simple space and looks for its next argument. If another space follows, so it replaces the next \HyPsd@spaceopti by an protected space \040.

```

1471 \def\HyPsd@spaceopti#1{ % first space
1472   \ifx\HyPsd@spaceopti#1%
1473     \040%
1474   \else
1475     #1%
1476   \fi
1477 }%

```

6.6.6 Replacing tokens

`\HyPsd@Subst` To save tokens `\HyPsd@StringSubst` is an wrapper for the command `\HyPsd@Subst` that does all the work: In string stored in command #3 it replaces the tokens #1 with #2.

- #1 Exact the tokens that should be replaced.
- #2 The replacement (don't need to be expanded).
- #3 Command with the string.

```

1478 \def\HyPsd@Subst#1#2#3{%
1479   \def\HyPsd@@ReplaceFi##1#1##2\END\fi{%
1480     \fi
1481     ##1%
1482     \ifx\scrollmode##2\scrollmode
1483     \else
1484       #2%
1485       \HyPsd@@ReplaceFi##2\END
1486     \fi
1487   }%
1488   \xdef#3{%
1489     \iftrue
1490       \expandafter\HyPsd@@ReplaceFi#3#1\END
1491     \fi
1492   }%
1493 }

```

`\HyPsd@StringSubst` To save tokens in `\pdfstringdef` `\HyPsd@StringSubst` is a wrapper, that expands argument #1 before calling `\HyPsd@Subst`.

```

1494 \def\HyPsd@StringSubst#1{%
1495   \expandafter\HyPsd@Subst\expandafter{\string#1}%
1496 }

```

6.6.7 Support for package `xspace`

`\HyPsd@doxspace` `\xspace` does not work, because it uses a `\futurelet` that cannot be executed in \TeX 's mouth. So this implementation uses an argument to examine the next token. In a previous version I reused `\@xspace`, but this version is shorter and easier to understand.

```

1497 \def\HyPsd@doxspace#1{%
1498   \ifx#1\relax\else
1499   \ifx#1.\else
1500   \ifx#1:\else
1501   \ifx#1,\else
1502   \ifx#1;\else
1503   \ifx#1!\else
1504   \ifx#1?\else
1505   \ifx#1/\else
1506   \ifx#1-\else
1507   \ifx#1'\else
1508     \HyPsd@SPACEOPTI
1509   \fi

```



```

1510         \fi
1511         \fi
1512         \fi
1513         \fi
1514         \fi
1515         \fi
1516         \fi
1517         \fi
1518         \fi
1519         #1%
1520 }%

```

6.6.8 Converting to Unicode

Eight bit characters are converted to the sixteen bit ones, \8 is replaced by \00, and \9 is removed. The result should be a valid Unicode PDF string without the Unicode marker at the beginning.

```

1521 \begingroup
1522   \catcode'\|=0 %
1523   \catcode'\|=12 %

```

\HyPsd@ConvertToUnicode

```

1524 |gdef|HyPsd@ConvertToUnicode#1{%
1525   |xdef#1{%
1526     |expandafter|HyPsd@DoConvert#1|@empty|@empty|@empty
1527   }%
1528   |ifx#1|@empty
1529   |else
1530     |xdef#1{%
1531       \376\377%
1532       #1%
1533     }%
1534   |fi
1535 }%

```

\HyPsd@DoConvert

```

1536 |gdef|HyPsd@DoConvert#1{%
1537   |ifx#1|@empty
1538   |else
1539     |Hy@ReturnAfterFi{%
1540       |ifx#1\%%
1541       \%%
1542       |expandafter|HyPsd@DoEscape
1543     |else
1544       \000#1%
1545       |expandafter|HyPsd@DoConvert
1546     |fi
1547   }%
1548   |fi
1549 }%

```

\HyPsd@DoEscape

```

1550 |gdef|HyPsd@DoEscape#1{%
1551   |ifx#19%
1552   |expandafter|HyPsd@GetTwoBytes
1553   |else

```

```

1554 |Hy@ReturnAfterFi{%
1555 |ifx#18%
1556 00%
1557 |expandafter|HyPsd@GetTwoBytes
1558 |else
1559 #1%
1560 |expandafter|HyPsd@GetOneByte
1561 |fi
1562 }%
1563 |fi
1564 }%

```

`\HyPsd@GetTwoBytes`

```

1565 |gdef|HyPsd@GetTwoBytes#1\#2#3#4{%
1566 #1\#2#3#4%
1567 |HyPsd@DoConvert
1568 }%

```

`\HyPsd@GetOneByte`

```

1569 |gdef|HyPsd@GetOneByte#1#2{%
1570 #1#2%
1571 |HyPsd@DoConvert
1572 }%
1573 |endgroup

```

`\HyPsd@@GetNextTwoTokens` \TeX does only allow nine parameters, so we need another macro to get more arguments.

```

1574 \def\HyPsd@GetNextTwoTokens#1#2#3\END#4{%
1575 \xdef#4{#4#1#2}%
1576 \HyPsd@@ConvertToUnicode#3\END#4%
1577 }

```

6.6.9 Support for UTF-8 input encoding

After `\usepackage[utf8]{inputenc}` there are macros that expect the UTF-8 octets as arguments. Therefore we can calculate the PDF octal sequences directly. Because the PDF format is limited to UCS-2, conversion macros are needed for UTF-8 sequences with two and three octets only.

This calculation must be done in an expandable context, so we use `e \TeX here` for performance reasons. Unhappily the results of divisions are rounded. Thus a circumvention via `\dimexpr` is used, e.g.:

`\numexpr 123/4\relax` is replaced by
`\number\dimexpr.25\dimexpr 123sp\relax\relax`

```

1578 \begingroup\expandafter\expandafter\expandafter\endgroup
1579 \expandafter\ifx\cename numexpr\endcename\relax
1580 \let\HyPsd@UTFviii\relax
1581 \else
1582 \begingroup
1583 \lccode'\~='^^f4\relax
1584 \lowercase{\endgroup
1585 \def\HyPsd@UTFviii{%
1586 \let\UTFviii@two@octets\HyPsd@UTFviii@two
1587 \let\UTFviii@three@octets\HyPsd@UTFviii@three
1588 \let\UTFviii@four@octets\HyPsd@UTFviii@four
1589 \ifx~\HyPsd@UTFviii@ccxliv@undef
1590 \let~\HyPsd@UTFviii@ccxliv@def

```

```

1591 \fi
1592 \let\unichar\HyPsd@unichar
1593 }%
1594 }%
1595 \def\HyPsd@UTFviii@ccxliv@undef{\@inpenc@undefined@{utf8}}%
1596 \edef\HyPsd@UTFviii@ccxliv@def{%
1597 \noexpand\UTFviii@four@octets\string ^f4%
1598 }%

```

The two octet form of UTF-8 110aaabb (A) and 10cccd (B) must be converted into octal numbers 00a and bcd. The result is \8a\bcd (with a, b, c, d as octal numbers). The conversion equations.

$$a := A/4 - 48 \quad (1)$$

$$b := A - 4 * (A/4) \quad (2)$$

$$c := B/8 - 8 * ((8 * (B/8))/8) \quad (3)$$

$$d := B - 8 * (B/8) \quad (4)$$

$$(5)$$

```

1599 \def\HyPsd@UTFviii@two#1#2{%
1600 \expandafter\HyPsd@UTFviii@@two
1601 \number\dimexpr.25\dimexpr'#1sp\expandafter\relax\expandafter|
1602 \number'#1\expandafter|
1603 \number\dimexpr.125\dimexpr'#2sp\expandafter\relax\expandafter|
1604 \number'#2 \@nil
1605 }%
1606 \def\HyPsd@UTFviii@@two#1|#2|#3|#4\@nil{%
1607 \expandafter\8%
1608 \number\numexpr #1-48\expandafter\relax
1609 \csname\number\numexpr #2-4*#1\relax\expandafter\endcsname
1610 \number\numexpr #3-8*%
1611 \number\dimexpr.125\dimexpr#3sp\relax\relax\expandafter\relax
1612 \number\numexpr #4-8*#3\relax
1613 }%

```

Three octet form: 1110aabb (A), 10bcccd (B), and 10eeefff (C). The result is \9abc\def (with a, ..., f as octal numbers). The conversion equations:

$$a := A/4 - 56 \quad (6)$$

$$b := 2 * (A - 4 * (A/4)) + ((B - 128 < 32)?0 : 1) \quad (7)$$

$$c := B/4 - 32 - ((B - 128 < 32)?0 : 8) \quad (8)$$

$$d := B - 4 * (B/4) \quad (9)$$

$$e := C/8 - 16 \quad (10)$$

$$f := C - 8 * (C/8) \quad (11)$$

$$(12)$$

```

1614 \def\HyPsd@UTFviii@three#1#2#3{%
1615 \expandafter\HyPsd@UTFviii@@three
1616 \number\dimexpr.25\dimexpr'#1sp\expandafter\relax\expandafter|
1617 \number'#1\expandafter|
1618 \number\ifnum\numexpr'#2-128\relax <32 0\else 1\fi\expandafter|
1619 \number\dimexpr.25\dimexpr'#2sp\expandafter\relax\expandafter|
1620 \number'#2\expandafter|
1621 \number\dimexpr.125\dimexpr'#3sp\expandafter\relax\expandafter|
1622 \number'#3 \@nil

```

```

1623 }%
1624 \def\HyPsd@UTFviii@@three#1|#2|#3|#4|#5|#6|#7\@nil{%
1625   \expandafter\9%
1626   \number\numexpr #1-56\expandafter\relax
1627   \number\numexpr 2*(#2-4*#1)+#3\expandafter\relax
1628   \number\numexpr #4 - 32 -\ifcase#3 0\else 8\fi\expandafter\relax
1629   \csname\number\numexpr #5-4*#4\relax\expandafter\endcsname
1630   \number\numexpr #6-16\expandafter\relax
1631   \number\numexpr #7-8*#6\relax
1632 }%

```

Surrogates: 4 octets in UTF-8, a surrogate pair in UTF-16. High surrogate range: U+D800–U+DBFF, low surrogate range: U+DC00–U+DFFF.

```

UTF-8: 11110uuu    10uuzzzz    10yyyyyy    10xxxxxx
www = uuuu - 1
UTF-16: 110110ww    wwzzzzyy    110111yy    yyxxxxxx
octal: 011 011 0ww 0ww zzz zyy 011 011 1yy 0yy xxx xxx

```

```

1633 \def\HyPsd@UTFviii@four#1#2{%
1634   \expandafter\HyPsd@UTFviii@four\number
1635   \numexpr-1+(' #1-240)*4+\dimexpr.0625\dimexpr'#2sp-128sp%
1636   \expandafter|\number
1637   \numexpr'#2-16*\dimexpr.0625\dimexpr'#2sp|%
1638 }%
1639 \def\HyPsd@UTFviii@four#1|#2|#3{%
1640   \933\number\dimexpr.25\dimexpr#1sp\relax\relax
1641   \csname\number\numexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
1642   \ifodd#2 %
1643     \number\numexpr(#2-1)/2\relax
1644   \else
1645     \number\numexpr#2/2\relax
1646   \fi
1647   \number\numexpr\ifodd#2 4+\fi
1648   \dimexpr.0625\dimexpr'#3sp-128sp\relax\relax\relax
1649   \933%
1650   \expandafter\HyPsd@UTFviii@four\number
1651   \numexpr'#3-16*\dimexpr.0625\dimexpr'#3sp|%
1652 }%
1653 \def\HyPsd@UTFviii@four#1|#2{%
1654   \number\numexpr4+\dimexpr.25\dimexpr#1sp\relax\relax\relax
1655   \csname\number\numexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
1656   \number\dimexpr.125\dimexpr'#2sp-128sp\relax\relax
1657   \number\numexpr'#2-8*\dimexpr.125\dimexpr'#2sp\relax\relax\relax
1658 }%

```

Input encoding utf8x of package ucs uses macro \unichar. Values greater than "FFFF are not supported.

```

1659 \def\HyPsd@unichar#1{%
1660   \ifHy@unicode
1661     \ifnum#1>"10FFFF %
1662       \HyPsd@UnicodeReplacementCharacter % illegal
1663     \else
1664       \ifnum#1>"FFFF %

```

High-surrogate code point. ("D800 = 55296, \p@ = 1pt = 65536sp)

```

1665   \expandafter\HyPsd@unichar\expandafter{%
1666     \number\numexpr 55296+%
1667     \dimexpr.0009765625\dimexpr\number#1sp-\p@

```

```

1668             \relax\relax\relax
1669         }%
Low-surrogate code point. ("DC00 = 56320, "DC00 - 65536 = -9216)
1670         \expandafter\HyPsd@unichar\expandafter{%
1671             \number\numexpr#1-9216%
1672             -1024*\dimexpr.0009765625\dimexpr\number#1sp-\p@
1673             \relax\relax\relax
1674     }%
1675     \else
1676         \ifnum#1>"7FF %
1677             \9%
1678             \expandafter\HyPsd@unichar@first@byte\expandafter{%
1679                 \number
1680                 \dimexpr.00390625\dimexpr\number#1sp\relax\relax
1681             }%
1682         \else
1683             \8%
1684             \number\dimexpr.00390625\dimexpr\number#1sp\relax\relax
1685         \fi
1686         \expandafter\HyPsd@unichar@second@byte\expandafter{%
1687             \number
1688             \numexpr#1-256*\number
1689             \dimexpr.00390625\dimexpr\number#1sp\relax\relax\relax
1690         }%
1691     \fi
1692 \fi
1693 \else
1694 .% unsupported (Unicode -> PDF Doc Encoding)
1695 \fi
1696 }%
1697 \def\HyPsd@UnicodeReplacementCharacter{\9377\375}%
1698 \def\HyPsd@unichar@first@byte#1{%
1699     \number\dimexpr.015625\dimexpr#1sp\relax\relax
1700     \expandafter\HyPsd@unichar@octtwo\expandafter{%
1701         \number
1702         \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
1703         \relax\relax\relax
1704     }%
1705 }%
1706 \def\HyPsd@unichar@second@byte#1{%
1707     \csname\number\dimexpr.015625\dimexpr#1sp\relax\relax\endcsname
1708     \expandafter\HyPsd@unichar@octtwo\expandafter{%
1709         \number
1710         \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
1711         \relax\relax\relax
1712     }%
1713 }%
1714 \def\HyPsd@unichar@octtwo#1{%
1715     \number\dimexpr.125\dimexpr#1sp\relax\relax
1716     \number\numexpr#1-8*\number\dimexpr.125\dimexpr#1sp%
1717     \relax\relax\relax
1718 }%
1719 \fi

```

7 Support of other packages

7.1 Class memoir

```
1720 \@ifclassloaded{memoir}{%
1721   \AtEndOfPackage{\RequirePackage{memhfixc}}%
1722 }{}
```

7.2 Package subfigure

Added fix for version 2.1. Here \sub@label is defined.

```
1723 \@ifpackageloaded{subfigure}{%
1724   \@ifundefined{sub@label}{%
1725     \Hy@hypertextnamesfalse
1726   }{%
1727     \renewcommand*{\sub@label}[1]{%
1728       \@bsphack
1729       \subfig@oldlabel{#1}%
1730       \if@filesw
1731         \begin{group}
1732           \edef\@currentlabstr{%
1733             \expandafter\strip@prefix\meaning\@currentlabelname
1734           }%
1735           \protected@write\@auxout{}{%
1736             \string\newlabel{sub@#1}{%
1737               {\@nameuse{@@thesub\@capttype}}%
1738               {\thepage}%
1739             }%
1740             \expandafter\strip@period\@currentlabstr
1741             \relax.\relax\@@%
1742           }%
1743           {\@currentHref}%
1744           {}%
1745         }%
1746       }%
1747     \end{group}
1748     \fi
1749     \@esphack
1750   }%
1751   \@ifpackagelater{subfigure}{2002/03/26}{%
1752     \providecommand*{\toclevel@subfigure}{1}%
1753     \providecommand*{\toclevel@subtable}{1}%
1754   }%
1755 }%
1756 }
```

7.3 Package xr and xr-hyper

The beta version of xr that supports \XR@addURL is called xr-hyper. Therefore we test for the macro itself and not for the package name:

```
1757 \@ifundefined{XR@addURL}{%
1758 }
```

If reading external aux files check whether they have a non zero fourth field in \newlabel and if so, add the URL as the fifth field.

```
1759 \def\xr@addURL#1{\xr@dURL#1{}{}{}{}\\}%
1760 \def\xr@dURL#1#2#3#4#5\\{%
1761   {#1}{#2}%
1762 }
```

```

1762 \if!#4!%
1763 \else
1764   {#3}{#4}{\XR@URL}%
1765 \fi
1766 }%
1767 }

1768 \def\Hy@true{true}
1769 \def\Hy@false{false}

    Providing dummy definitions.

1770 \let\literalps@out\@gobble
1771 \newcommand\pdfbookmark[3][]{ }
1772 \def\Acrobatmenu#1#2{\leavevmode#2}
1773 \def\Hy@writebookmark#1#2#3#4#5{ }%

```

8 Help macros for links

Anchors get created on the baseline of where they occur. If an XYZ PDF view is set, this means that the link places the top of the screen *on the baseline* of the target. If this is an equation, for instance, it means that you cannot see anything. Some links, of course, are created at the start of environments, and so it works. To allow for this, anchors are raised, where possible, by some small amount. This defaults to `\baselineskip`, but users can set it to something else in two ways (thanks to Heiko Oberdiek for suggesting this):

1. Redefine `\HyperRaiseLinkDefault` to be eg the height of a `\strut`
2. Redefine `\HyperRaiseLinkHook` to do something complicated; it must give a value to `\HyperRaiseLinkLength`, which is what actually gets used

```

1774 \let\HyperRaiseLinkHook\@empty
1775 \def\HyperRaiseLinkDefault{\baselineskip}

```

`\HyperRaiseLinkHook` allows the user to reassign `\HyperRaiseLinkLength`.

```

1776 \def\Hy@raisedlink#1{%
1777   \ifvmode
1778     #1%
1779   \else
1780     \penalty\@M
1781     \smash{%
1782       \begingroup
1783         \let\HyperRaiseLinkLength\@tempdima
1784         \setlength\HyperRaiseLinkLength\HyperRaiseLinkDefault
1785         \HyperRaiseLinkHook
1786       \expandafter\endgroup
1787       \expandafter\raise\the\HyperRaiseLinkLength\hbox{#1}%
1788     }%
1789   \fi
1790 }

```

`\Hy@SaveLastskip` Inserting a `\special` command to set a destination destroys the `\lastskip` value.
`\Hy@RestoreLastskip`

```

1791 \def\Hy@SaveLastskip{%
1792   \let\Hy@RestoreLastskip\relax
1793   \ifvmode
1794     \ifdim\lastskip=\z@
1795       \let\Hy@RestoreLastskip\nobreak
1796     \else

```

```

1797     \begingroup
1798     \skip@=-\lastskip
1799     \edef\x{%
1800     \endgroup
1801     \def\noexpand\Hy@RestoreLastskip{%
1802     \noexpand\ifvmode
1803     \noexpand\nobreak
1804     \vskip\the\skip@
1805     \vskip\the\lastskip\relax
1806     \noexpand\fi
1807     }%
1808     }%
1809     \x
1810     \fi
1811 \else
1812   \ifhmode
1813     \ifdim\lastskip=\z@
1814       \let\Hy@RestoreLastskip\nobreak
1815     \else
1816       \begingroup
1817       \skip@=-\lastskip
1818       \edef\x{%
1819       \endgroup
1820       \def\noexpand\Hy@RestoreLastskip{%
1821       \noexpand\ifhmode
1822       \noexpand\nobreak
1823       \hskip\the\skip@
1824       \hskip\the\lastskip\relax
1825       \noexpand\fi
1826       }%
1827       }%
1828       \x
1829       \fi
1830     \fi
1831 \fi
1832 }%

```

9 Options

9.1 Help macros

\Hy@boolkey

```

1833 \def\Hy@boolkey{\@dblarg\Hy@@boolkey}
1834 \def\Hy@@boolkey[#1]#2#3{%
1835   \edef\Hy@tempa{#3}%
1836   \lowercase\expandafter{%
1837     \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
1838   }%
1839   \ifx\Hy@tempa\@empty
1840     \let\Hy@tempa\Hy@true
1841   \fi
1842   \ifx\Hy@tempa\Hy@true
1843   \else
1844     \ifx\Hy@tempa\Hy@false
1845     \else
1846       \let\Hy@tempa\relax

```



```

1847 \fi
1848 \fi
1849 \ifx\Hy@tempa\relax
1850 \Hy@WarnOptionValue{#3}{#1}{‘true’ or ‘false’}%
1851 \else
1852 \Hy@Info{Option ‘#1’ set ‘\Hy@tempa’}%
1853 \csname Hy@#2\Hy@tempa\endcsname
1854 \fi
1855 }

```

\Hy@WarnOptionValue

```

1856 \def\Hy@WarnOptionValue#1#2#3{%
1857 \Hy@Warning{%
1858 Unexpected value ‘#1’\MessageBreak
1859 of option ‘#2’ instead of\MessageBreak
1860 #3%
1861 }%
1862 }

```

\Hy@DisableOption

```

1863 \def\Hy@DisableOption#1{%
1864 \@ifundefined{KV@Hyp@#1@default}{%
1865 \define@key{Hyp}{#1}%
1866 }{%
1867 \define@key{Hyp}{#1}[]%
1868 }%
1869 {\Hy@WarnOptionDisabled{#1}}%
1870 }

```

\Hy@WarnOptionDisabled

```

1871 \def\Hy@WarnOptionDisabled#1{%
1872 \Hy@Warning{%
1873 Option ‘#1’ has already been used,\MessageBreak
1874 setting the option has no effect%
1875 }%
1876 }

```

\Hy@CheckOptionValue Some options take a string value out of a limited set of values. Macro \Hy@CheckOptionValue checks whether the given value #1 for option #2 is a member of the value list #3.

```

1877 \def\Hy@CheckOptionValue#1#2#3{%
1878 \begingroup
1879 \edef\x{#1}%
1880 \@onelevel@sanitize\x
1881 \let\y=y%
1882 \def\do##1##2{%
1883 \def\z{##1}%
1884 \@onelevel@sanitize\z
1885 \ifx\x\z
1886 \let\y=n%
1887 \let\do\@gobbletwo
1888 \fi
1889 }%
1890 #3%
1891 \ifx\y y%
1892 \def\do##1##2{%
1893 * ‘##1’%
1894 \ifx\\##2\\\else\space(##2)\fi

```

```

1895         \MessageBreak
1896     }%
1897     \Hy@Warning{%
1898         Values of option '#2':\MessageBreak
1899         #3%
1900         * An empty value disables the option.\MessageBreak
1901         Unknown value '\x'%
1902     }%
1903     \fi
1904 \endgroup
1905 }

\Hy@DefNameKey #1: option name
#2: \do list with known values, first argument of \do is value, second argument is a
comment.
1906 \def\Hy@DefNameKey#1{%
1907     \expandafter\Hy@@DefNameKey\csname @#1\endcsname{#1}%
1908 }

\Hy@@DefNameKey #1: macro for value storage
#2: option name
#3: \do list with known values.
1909 \def\Hy@@DefNameKey#1#2#3{%
1910     \define@key{Hyp}{#2}{%
1911         \edef#1{##1}%
1912         \ifx#1\@empty
1913             \else
1914                 \Hy@CheckOptionValue{##1}{#2}{#3}%
1915             \fi
1916     }%
1917     \let#1\@empty
1918 }

\Hy@UseNameKey
1919 \def\Hy@UseNameKey#1#2{%
1920     \ifx#2\@empty
1921     \else
1922         /#1/#2%
1923     \fi
1924 }

```

9.2 Defining the options

```

1925 \define@key{Hyp}{implicit}[true]{%
1926     \Hy@boolkey{implicit}{#1}%
1927 }
1928 \define@key{Hyp}{draft}[true]{%
1929     \Hy@boolkey{draft}{#1}%
1930 }
1931 \define@key{Hyp}{final}[true]{%
1932     \Hy@boolkey{final}{#1}%
1933 }
1934 \let\KV@Hyp@nolinks\KV@Hyp@draft
1935 \define@key{Hyp}{a4paper}[true]{%
1936     \def\special@paper{210mm,297mm}%
1937     \def\Hy@pageheight{842}%

```

```

1938 }
1939 \define@key{Hyp}{a5paper}[true]{%
1940   \def\special@paper{148mm,210mm}%
1941   \def\Hy@pageheight{595}%
1942 }
1943 \define@key{Hyp}{b5paper}[true]{%
1944   \def\special@paper{176mm,250mm}%
1945   \def\Hy@pageheight{709}%
1946 }
1947 \define@key{Hyp}{letterpaper}[true]{%
1948   \def\special@paper{8.5in,11in}%
1949   \def\Hy@pageheight{792}%
1950 }
1951 \define@key{Hyp}{legalpaper}[true]{%
1952   \def\special@paper{8.5in,14in}%
1953   \def\Hy@pageheight{1008}%
1954 }
1955 \define@key{Hyp}{executivepaper}[true]{%
1956   \def\special@paper{7.25in,10.5in}%
1957   \def\Hy@pageheight{720}%
1958 }
1959 \define@key{Hyp}{setpagesize}[true]{%
1960   \Hy@boolkey{setpagesize}{#1}%
1961 }
1962 \define@key{Hyp}{debug}[true]{%
1963   \Hy@boolkey[debug]{verbose}{#1}%
1964 }
1965 \define@key{Hyp}{linktocpage}[true]{%
1966   \Hy@boolkey{linktocpage}{#1}%
1967   \ifHy@linktocpage
1968     \let\Hy@linktoc\Hy@linktoc@page
1969   \else
1970     \let\Hy@linktoc\Hy@linktoc@section
1971   \fi
1972 }
1973 \chardef\Hy@linktoc@none=0 %
1974 \chardef\Hy@linktoc@section=1 %
1975 \chardef\Hy@linktoc@page=2 %
1976 \chardef\Hy@linktoc@all=3 %
1977 \ifHy@linktocpage
1978   \let\Hy@linktoc\Hy@linktoc@page
1979 \else
1980   \let\Hy@linktoc\Hy@linktoc@section
1981 \fi
1982 \define@key{Hyp}{linktoc}{%
1983   \@ifundefined{Hy@linktoc@#1}{%
1984     \Hy@Warning{%
1985       Unexpected value ‘#1’ of\MessageBreak
1986       option ‘linktoc’ instead of ‘none’,\MessageBreak
1987       ‘section’, ‘page’ or ‘all’%
1988     }%
1989   }{%
1990     \expandafter\let\expandafter\Hy@linktoc
1991     \csname Hy@linktoc@#1\endcsname
1992   }%
1993 }
1994 \define@key{Hyp}{extension}{\def\XR@ext{#1}}

```

```

1995 \let\XR@ext\relax
1996 \define@key{Hyp}{verbose}[true]{%
1997   \Hy@boolkey{verbose}{#1}%
1998 }
1999 \define@key{Hyp}{typexml}[true]{%
2000   \Hy@boolkey{typexml}{#1}%
2001 }

```

If we are going to PDF via HyperTeX \special commands, the dvips (-z option) processor does not know the *height* of a link, as it works solely on the position of the closing \special. If we use this option, the \special is raised up by the right amount, to fool the dvi processor.

```

2002 \define@key{Hyp}{raiselinks}[true]{%
2003   \Hy@boolkey{raiselinks}{#1}%
2004 }

```

Most PDF-creating drivers do not allow links to be broken

```

2005 \def\Hy@setbreaklinks#1{%
2006   \csname breaklinks#1\endcsname
2007 }

2008 \def\Hy@breaklinks@unsupported{%
2009   \ifx\Hy@setbreaklinks\@gobble
2010     \ifHy@breaklinks
2011       \Hy@WarningNoLine{%
2012         You have enabled option 'breaklinks'.\MessageBreak
2013         But driver '\Hy@driver.def' does not support this.\MessageBreak
2014         Expect trouble with the link areas of broken links%
2015       }%
2016     \fi
2017   \fi
2018 }

2019 \define@key{Hyp}{breaklinks}[true]{%
2020   \Hy@boolkey{breaklinks}{#1}%
2021   \let\Hy@setbreaklinks\@gobble
2022 }

```

Determines whether an automatic anchor is put on each page

```

2023 \define@key{Hyp}{pageanchor}[true]{%
2024   \Hy@boolkey{pageanchor}{#1}%
2025 }

```

Are the page links done as plain arabic numbers, or do they follow the formatting of the package? The latter loses if you put in typesetting like \textbf or the like.

```

2026 \define@key{Hyp}{plainpages}[true]{%
2027   \Hy@boolkey{plainpages}{#1}%
2028 }

```

Are the names for anchors made as per the HyperTeX system, or do they simply use what L^AT_EX provides?

```

2029 \define@key{Hyp}{naturalnames}[true]{%
2030   \Hy@boolkey{naturalnames}{#1}%
2031 }

```

Completely ignore the names as per the HyperTeX system, and use unique counters.

```

2032 \define@key{Hyp}{hypertextnames}[true]{%
2033   \Hy@boolkey{hypertextnames}{#1}%
2034 }

```

Currently, dvips doesn't allow anchors nested within targets, so this option tries to stop that happening. Other processors may be able to cope.

```

2035 \define@key{Hyp}{nesting}[true]{%
2036   \Hy@boolkey{nesting}{#1}%
2037 }

2038 \define@key{Hyp}{unicode}[true]{%
2039   \Hy@boolkey{unicode}{#1}%
2040   \ifHy@unicode
2041     \def\HyPsd@pdfencoding{unicode}%
2042   \else
2043     \def\HyPsd@pdfencoding{pdfdoc}%
2044   \fi
2045   \HyPsd@LoadUnicode
2046 }

2047 \def\HyPsd@LoadUnicode{%
2048   \@ifundefined{T@PU}{%
2049     \input{puenc.def}%
2050     \HyLinguex@Restore
2051   }{}%
2052   \DeclareFontFamily{PU}{pdf}{}%
2053   \DeclareFontShape{PU}{pdf}{m}{n}{ <-> cmr10 }{}%
2054   \DeclareFontSubstitution{PU}{pdf}{m}{n}%
2055   \global\let\HyPsd@LoadUnicode\relax
2056 }

2057 \AtBeginDocument{%
2058   \ifx\HyPsd@LoadUnicode\relax
2059   \else
2060     \def\HyPsd@LoadUnicode{%
2061       \PackageError{hyperref}{%
2062         Unicode support for bookmarks is not available.\MessageBreak
2063         Activate unicode support by using one of the options\MessageBreak
2064         'unicode', 'pdfencoding=unicode', 'pdfencoding=auto'\MessageBreak
2065         in the preamble%
2066       }{\@ehc
2067         \global\let\HyPsd@LoadUnicode\relax
2068         \global\Hy@unicodetrue
2069         \global\let\Hy@unicodetrue\Hy@unicodetrue
2070       }%
2071     \fi
2072 }

2073 \define@key{Hyp}{pdfencoding}{%
2074   \edef\HyPsd@temp{#1}%
2075   \ifx\HyPsd@temp\HyPsd@pdfencoding@pdfdoc
2076     \let\HyPsd@pdfencoding\HyPsd@temp
2077     \Hy@unicodetrue
2078   \else
2079     \ifcase\ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
2080       \z@
2081     \else
2082       \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
2083         \z@
2084       \else
2085         \@ne
2086       \fi
2087     \fi
2088     \let\HyPsd@pdfencoding\HyPsd@temp
2089     \hypersetup{unicode}%
2090     \ifHy@unicode
2091       \def\HyPsd@pdfencoding{#1}%

```

```

2092         \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
2093         \HyPsd@LoadStringEnc
2094     \fi
2095     \else
2096         \Hy@Warning{Cannot switch to unicode bookmarks}%
2097         \let\HyPsd@pdfencoding\HyPsd@pdfencoding@pdfdoc
2098     \fi
2099     \else
2100         \@onelevel@sanitize\HyPsd@temp
2101         \Hy@Warning{%
2102             Values of option 'pdfencoding':\MessageBreak
2103             'pdfdoc', 'unicode', 'auto'.\MessageBreak
2104             Ignoring unknown value '\HyPsd@temp'%
2105         }%
2106     \fi
2107 \fi
2108 }
2109 \def\HyPsd@pdfencoding@auto{auto}
2110 \def\HyPsd@pdfencoding@pdfdoc{pdfdoc}
2111 \def\HyPsd@pdfencoding@unicode{unicode}
2112 \let\HyPsd@pdfencoding\Hy@pdfencoding@pdfdoc
2113 \def\HyPsd@LoadStringEnc{%
2114     \RequirePackage{stringenc}[2007/06/14]%
2115     \let\HyPsd@LoadStringEnc\relax
2116 }
2117 \AtBeginDocument{%
2118     \@ifpackageloaded{stringenc}{%
2119         \let\HyPsd@LoadStringEnc\relax
2120     }{%
2121         \def\HyPsd@LoadStringEnc{%
2122             \Hy@WarningNoLine{%
2123                 Missing package 'stringenc'. Use 'pdfencoding=auto'\MessageBreak
2124                 in the preamble or load the package there%
2125             }%
2126         }%
2127     }%
2128 }
2129 \newif\ifHy@setpdfversion
2130 \define@key{Hyp}{pdfversion}{%
2131     \@ifundefined{Hy@pdfversion@#1}{%
2132         \PackageWarning{hyperref}{%
2133             Unsupported PDF version '#1'.\MessageBreak
2134             Valid values: 1.2 until 1.9%
2135         }%
2136     }{%
2137         \Hy@setpdfversiontrue
2138         \edef\Hy@pdfversion{\@nameuse{Hy@pdfversion@#1}}%
2139     }%
2140 }
2141 \@namedef{Hy@pdfversion@1.2}{2}%
2142 \@namedef{Hy@pdfversion@1.3}{3}%
2143 \@namedef{Hy@pdfversion@1.4}{4}%
2144 \@namedef{Hy@pdfversion@1.5}{5}%
2145 \@namedef{Hy@pdfversion@1.6}{6}%
2146 \@namedef{Hy@pdfversion@1.7}{7}%
2147 \@namedef{Hy@pdfversion@1.8}{8}%
2148 \@namedef{Hy@pdfversion@1.9}{9}%

```

```
2149 \def\Hy@pdfversion{2}
```

10 Options for different drivers

```
2150 \define@key{Hyp}{hyperref}[true]{}
2151 \define@key{Hyp}{tex4ht}[true]{%
2152   \Hy@texhttrue
2153   \setkeys{Hyp}{colorlinks=true}%
2154   \def\BeforeTeXIVht{\usepackage{color}}%
2155   \def\Hy@driver{htex4ht}%
2156   \def\MaybeStopEarly{%
2157     \typeout{Hyperref stopped early}%
2158     \AfterBeginDocument{%
2159       \PDF@FinishDoc
2160       \gdef\PDF@FinishDoc{}%
2161     }%
2162   \endinput
2163 }%
2164 }
2165 \define@key{Hyp}{pdftex}[true]{%
2166   \def\Hy@driver{hpdftex}%
2167 }
2168 \define@key{Hyp}{nativepdf}[true]{%
2169   \def\Hy@driver{hdvips}%
2170 }
2171 \define@key{Hyp}{dvipdfm}[true]{%
2172   \def\Hy@driver{hdvipdfm}%
2173 }
2174 \define@key{Hyp}{dvipdfmx}[true]{%
2175   \def\Hy@driver{hdvipdfm}%
2176 }
2177 \define@key{Hyp}{dvipdfmx-outline-open}[true]{%
2178   \expandafter\ifx\csname if#1\expandafter\endcsname
2179     \csname iftrue\endcsname
2180     \chardef\SpecialDvipdfmxOutlineOpen\@ne
2181   \else
2182     \chardef\SpecialDvipdfmxOutlineOpen\z@
2183   \fi
2184 }
2185 \define@key{Hyp}{xetex}[true]{%
2186   \def\Hy@driver{hdvipdfm}%
2187 }
2188 \define@key{Hyp}{pdfmark}[true]{%
2189   \def\Hy@driver{hdvips}%
2190 }
2191 \define@key{Hyp}{dvips}[true]{%
2192   \def\Hy@driver{hdvips}%
2193 }
2194 \define@key{Hyp}{hypertex}[true]{%
2195   \def\Hy@driver{hypertex}%
2196 }
2197 \let\Hy@MaybeStopNow\relax
2198 \define@key{Hyp}{vtex}[true]{%
2199   \begingroup\expandafter\expandafter\expandafter\endgroup
2200   \expandafter\ifx\csname OpMode\endcsname\relax
2201     \@latex@error{Non-VTeX processor}{}%
2202     \global\let\Hy@MaybeStopNow\endinput
```

```

2203 \endinput
2204 \else
2205 \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2206 \def\Hy@driver{hvtex}%
2207 \else
2208 \ifnum\OpMode=10\relax
2209 \def\Hy@driver{hvtexhtm}%
2210 \def\MaybeStopEarly{%
2211 \typeout{Hyperref stopped early}%
2212 \AfterBeginDocument{%
2213 \PDF@FinishDoc
2214 \gdef\PDF@FinishDoc{}%
2215 }%
2216 \endinput
2217 }%
2218 \else
2219 \@latex@error{Mode (\the\OpMode) has no hyperref driver}{}%
2220 \global\let\Hy@MaybeStopNow\endinput
2221 \endinput
2222 \fi
2223 \fi
2224 \fi
2225 }
2226 \define@key{Hyp}{vtexpdfmark}[true]{%
2227 \begingroup\expandafter\expandafter\expandafter\endgroup
2228 \expandafter\ifx\cscname OpMode\endcscname\relax
2229 \@latex@error{Non-VTeX processor}{}%
2230 \let\Hy@MaybeStopNow\endinput
2231 \endinput
2232 \else
2233 \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2234 \def\Hy@driver{hvtexmrk}%
2235 \else
2236 \@latex@error{Mode (\the\OpMode) has no hyperref driver}{}%
2237 \let\Hy@MaybeStopNow\endinput
2238 \endinput
2239 \fi
2240 \fi
2241 }
2242 \define@key{Hyp}{dviwindo}[true]{%
2243 \def\Hy@driver{hdviwind}%
2244 \setkeys{Hyp}{colorlinks}%
2245 \PassOptionsToPackage{dviwindo}{color}%
2246 }
2247 \define@key{Hyp}{dvipsone}[true]{%
2248 \def\Hy@driver{hdvipson}%
2249 }
2250 \define@key{Hyp}{textures}[true]{%
2251 \def\Hy@driver{htexture}%
2252 }
2253 \define@key{Hyp}{latex2html}[true]{%
2254 \AtBeginDocument{\@@latextohtmlX}%
2255 }

```

No more special treatment for ps2pdf. Let it sink or swim.

```

2256 \define@key{Hyp}{ps2pdf}[true]{%
2257 \def\Hy@driver{hdvips}%
2258 \providecommand*\@pdfborder{0 0 1}%

```


2259 }

11 Options to add extra features

Make included figures (assuming they use the standard graphics package) be hypertext links. Off by default. Needs more work.

```
2260 \define@key{Hyp}{hyperfigures}[true]{%
2261   \Hy@boolkey[hyperfigures]{figures}{#1}%
2262 }
```

The automatic footnote linking can be disabled by option hyperfootnotes.

```
2263 \define@key{Hyp}{hyperfootnotes}[true]{%
2264   \Hy@boolkey{hyperfootnotes}{#1}%
2265 }
```

Set up back-referencing to be hyper links, by page, slide or section number,

```
2266 \def\back@none{none}
2267 \def\back@section{section}
2268 \def\back@page{page}
2269 \def\back@slide{slide}
2270 \define@key{Hyp}{backref}[section]{%
2271   \lowercase{\def\Hy@tempa{#1}}%
2272   \ifx\Hy@tempa\@empty
2273     \let\Hy@tempa\back@section
2274   \fi
2275   \ifx\Hy@tempa\Hy@false
2276     \let\Hy@tempa\back@none
2277   \fi
2278   \ifx\Hy@tempa\back@slide
2279     \let\Hy@tempa\back@section
2280   \fi
2281   \ifx\Hy@tempa\back@page
2282     \PassOptionsToPackage{hyperpageref}{backref}%
2283     \Hy@backreftrue
2284   \else
2285     \ifx\Hy@tempa\back@section
2286       \PassOptionsToPackage{hyperref}{backref}%
2287       \Hy@backreftrue
2288     \else
2289       \ifx\Hy@tempa\back@none
2290         \Hy@backreffalse
2291       \else
2292         \Hy@WarnOptionValue{#1}{backref}{%
2293           'section', 'slide', 'page', 'none', \MessageBreak
2294           or 'false'}%
2295       \fi
2296     \fi
2297   \fi
2298 }
2299 \define@key{Hyp}{pagebackref}[true]{%
2300   \edef\Hy@tempa{#1}%
2301   \lowercase\expandafter{%
2302     \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2303   }%
2304   \ifx\Hy@tempa\@empty
2305     \let\Hy@tempa\Hy@true
2306   \fi
2307   \ifx\Hy@tempa\Hy@true
```

```

2308 \PassOptionsToPackage{hyperpageref}{backref}%
2309 \Hy@backreftrue
2310 \else
2311 \ifx\Hy@tempa\Hy@false
2312 \Hy@backreffalse
2313 \else
2314 \Hy@WarnOptionValue{#1}{pagebackref}{‘true’ or ‘false’}%
2315 \fi
2316 \fi
2317 }

```

Make index entries be links back to the relevant pages. By default this is turned on, but may be stopped.

```

2318 \define@key{Hyp}{hyperindex}[true]{%
2319 \Hy@boolkey{hyperindex}{#1}%
2320 }

```

Configuration of encap char.

```

2321 \define@key{Hyp}{encap}[\|]{%
2322 \def\HyInd@EncapChar{#1}%
2323 }

```

12 Language options

The `\autoref` feature depends on the language.

```

2324 \def\HyLang@afrikaans{%
2325 \def\equationautorefname{Vergelyking}%
2326 \def\footnoteautorefname{Voetnota}%
2327 \def\itemautorefname{Item}%
2328 \def\figureautorefname{Figuur}%
2329 \def\tableautorefname{Tabel}%
2330 \def\partautorefname{Deel}%
2331 \def\appendixautorefname{Bylae}%
2332 \def\chapterautorefname{Hoofstuk}%
2333 \def\sectionautorefname{Afdeling}%
2334 \def\subsectionautorefname{Subafdeling}%
2335 \def\subsubsectionautorefname{Subsubafdeling}%
2336 \def\paragraphautorefname{Paragraaf}%
2337 \def\subparagraphautorefname{Subparagraaf}%
2338 \def\FancyVerbLineautorefname{Lyn}%
2339 \def\theoremautorefname{Teorema}%
2340 \def\pageautorefname{Bladsy}%
2341 }
2342 \def\HyLang@english{%
2343 \def\equationautorefname{Equation}%
2344 \def\footnoteautorefname{footnote}%
2345 \def\itemautorefname{item}%
2346 \def\figureautorefname{Figure}%
2347 \def\tableautorefname{Table}%
2348 \def\partautorefname{Part}%
2349 \def\appendixautorefname{Appendix}%
2350 \def\chapterautorefname{chapter}%
2351 \def\sectionautorefname{section}%
2352 \def\subsectionautorefname{subsection}%
2353 \def\subsubsectionautorefname{subsubsection}%
2354 \def\paragraphautorefname{paragraph}%
2355 \def\subparagraphautorefname{subparagraph}%

```

```

2356 \def\FancyVerbLineautorefname{line}%
2357 \def\theoremautorefname{Theorem}%
2358 \def\pageautorefname{page}%
2359 }
2360 \def\HyLang@french{%
2361 \def\equationautorefname{'Equation}%
2362 \def\footnoteautorefname{note}%
2363 \def\itemautorefname{item}%
2364 \def\figureautorefname{Figure}%
2365 \def\tableautorefname{Tableau}%
2366 \def\partautorefname{Partie}%
2367 \def\appendixautorefname{Appendice}%
2368 \def\chapterautorefname{chapitre}%
2369 \def\sectionautorefname{section}%
2370 \def\subsectionautorefname{sous-section}%
2371 \def\subsubsectionautorefname{sous-sous-section}%
2372 \def\paragraphautorefname{paragraphe}%
2373 \def\subparagraphautorefname{sous-paragraphe}%
2374 \def\FancyVerbLineautorefname{ligne}%
2375 \def\theoremautorefname{Th\'eor\'eme}%
2376 \def\pageautorefname{page}%
2377 }
2378 \def\HyLang@german{%
2379 \def\equationautorefname{Gleichung}%
2380 \def\footnoteautorefname{Fu\ss note}%
2381 \def\itemautorefname{Punkt}%
2382 \def\figureautorefname{Abbildung}%
2383 \def\tableautorefname{Tabelle}%
2384 \def\partautorefname{Teil}%
2385 \def\appendixautorefname{Anhang}%
2386 \def\chapterautorefname{Kapitel}%
2387 \def\sectionautorefname{Abschnitt}%
2388 \def\subsectionautorefname{Unterabschnitt}%
2389 \def\subsubsectionautorefname{Unterunterabschnitt}%
2390 \def\paragraphautorefname{Absatz}%
2391 \def\subparagraphautorefname{Unterabsatz}%
2392 \def\FancyVerbLineautorefname{Zeile}%
2393 \def\theoremautorefname{Theorem}%
2394 \def\pageautorefname{Seite}%
2395 }
2396 \def\HyLang@italian{%
2397 \def\equationautorefname{Equazione}%
2398 \def\footnoteautorefname{nota}%
2399 \def\itemautorefname{punto}%
2400 \def\figureautorefname{Figura}%
2401 \def\tableautorefname{Tabella}%
2402 \def\partautorefname{Parte}%
2403 \def\appendixautorefname{Appendice}%
2404 \def\chapterautorefname{Capitolo}%
2405 \def\sectionautorefname{sezione}%
2406 \def\subsectionautorefname{sottosezione}%
2407 \def\subsubsectionautorefname{sottosottosezione}%
2408 \def\paragraphautorefname{paragrafo}%
2409 \def\subparagraphautorefname{sottoparagrafo}%
2410 \def\FancyVerbLineautorefname{linea}%
2411 \def\theoremautorefname{Teorema}%
2412 \def\pageautorefname{Pag.\@}%

```

```

2413 }
2414 \def\HyLang@magyar{%
2415   \def\equationautorefname{Egyenlet}%
2416   \def\footnoteautorefname{l\'abjegyzet}%
2417   \def\itemautorefname{Elem}%
2418   \def\figureautorefname{\'Abra}%
2419   \def\tableautorefname{T\'abl\'azat}%
2420   \def\partautorefname{R\'esz}%
2421   \def\appendixautorefname{F\'uggel\'ek}%
2422   \def\chapterautorefname{fejezet}%
2423   \def\sectionautorefname{szakasz}%
2424   \def\subsectionautorefname{alszakasz}%
2425   \def\subsubsectionautorefname{alalszakasz}%
2426   \def\paragraphautorefname{bekezd\'es}%
2427   \def\subparagraphautorefname{albekezd\'es}%
2428   \def\FancyVerbLineautorefname{sor}%
2429   \def\theoremautorefname{T\'etel}%
2430   \def\pageautorefname{oldal}%
2431 }
2432 \def\HyLang@portuges{%
2433   \def\equationautorefname{Equa\c c\~ao}%
2434   \def\footnoteautorefname{Nota de rodap\'e}%
2435   \def\itemautorefname{Item}%
2436   \def\figureautorefname{Figura}%
2437   \def\tableautorefname{Tabela}%
2438   \def\partautorefname{Parte}%
2439   \def\appendixautorefname{Ap\~endice}%
2440   \def\chapterautorefname{Cap\'itulo}%
2441   \def\sectionautorefname{Se\c c\~ao}%
2442   \def\subsectionautorefname{Subse\c c\~ao}%
2443   \def\subsubsectionautorefname{Subsubse\c c\~ao}%
2444   \def\paragraphautorefname{par\'agrafo}%
2445   \def\subparagraphautorefname{subpar\'agrafo}%
2446   \def\FancyVerbLineautorefname{linha}%
2447   \def\theoremautorefname{Teorema}%
2448   \def\pageautorefname{P\'agina}%
2449 }

```

Next commented section for Russian is provided by Olga Lapko.

Next follow the checked reference names with commented variants and explanations. All they are abbreviated and they won't create a grammatical problems in the *middle* of sentences.

The most weak points in these abbreviations are the `\equationautorefname`, `\theoremautorefname` and the `\FancyVerbLineautorefname`. But those three, and also the `\footnoteautorefname` are not *too* often referenced. Another rather weak point is the `\appendixautorefname`.

```

2450 \def\HyLang@russian{%

```

The abbreviated reference to the equation: it is not for "the good face of the book", but maybe it will be better to get the company for the `\theoremautorefname`?

```

2451   \def\equationautorefname{\cyr\cyrv\cyrery\cyr.}%

```

The name of the equation reference has common form for both nominative and accusative but changes in other forms, like "of `\autoref{auto}`" etc. The full name must follow full name of the `\theoremautorefname`.

```

2452 %   \def\equationautorefname{%
2453 %     \cyr\cyrv\cyrery\cyr\cyrzh\cyre\cyrn\cyri\cyre
2454 %   }%

```

The variant of footnote has abbreviation form of the synonym of the word “footnote”. This variant of abbreviated synonym has alternative status (maybe obsolete?).

```
2455 \def\footnoteautorefname{%
2456   \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyrr.\ \cyrp\cyrr\cyri\cyrm.%
2457 }%
```

Commented form of the full synonym for “footnote”. It has common form for both nominative and accusative but changes in other forms, like “of \autoref{auto}”

```
2458 % \def\footnoteautorefname{%
2459 %   \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyrr\cyro\cyrch\cyrn\cyro\cyre\ %
2460 %   \cyrp\cyrr\cyri\cyrm\cyre\cyrch\cyra\cyrn\cyri\cyre
2461 % }%
```

Commented forms of the “footnote”: have different forms, the same is for the nominative and accusative. (The others needed?)

```
2462 % \def\Nomfootnoteautorefname{\cyr\cyrs\cyrn\cyro\cyrs\cyrk\cyra}%
2463 % \def\Accfootnoteautorefname{\cyr\cyrs\cyrn\cyro\cyrs\cyrk\cyru}%
```

Name of the list item, can be confused with the paragraph reference name, but reader could understand meaning from context(?). Commented variant has common form for both nominative and accusative but changes in other forms, like “of \autoref{auto}” etc.

```
2464 \def\itemautorefname{\cyr\cyrp.}%
2465 % \def\itemautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%
```

Names of the figure and table have stable (standard) abbreviation forms. No problem in the middle of sentence.

```
2466 \def\figureautorefname{\cyr\cyrr\cyri\cyrs.}%
2467 \def\tableautorefname{\cyr\cyrt\cyra\cyrb\cyrl.}%
```

Names of the part, chapter, section(s) have stable (standard) abbreviation forms. No problem in the middle of sentence.

```
2468 \def\partautorefname{\cyr\cyrch.}%
2469 \def\chapterautorefname{\cyr\cyrg\cyrl.}%
2470 \def\sectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%
```

Name of the appendix can use this abbreviation, but it is not standard for books, i.e. not for “the good face of the book”. Commented variant has common form for both nominative and accusative but changes in other forms, like “of \autoref{auto}” etc.

```
2471 \def\appendixautorefname{\cyr\cyrp\cyrr\cyri\cyrl.}%
2472 % \def\appendixautorefname{%
2473 %   \cyr\cyrp\cyrr\cyri\cyrl\cyro\cyrz\cyre\cyrn\cyri\cyre
2474 % }%
```

The sectioning command have stable (almost standard) and common abbreviation form for all levels (the meaning of these references visible from the section number). No problem.

```
2475 \def\subsectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%
2476 \def\subsubsectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%
```

The names of references to paragraphs also have stable (almost standard) and common abbreviation form for all levels (the meaning of these references is visible from the section number). No problem in the middle of sentence.

```
2477 \def\paragraphautorefname{\cyr\cyrp.}%
2478 \def\subparagraphautorefname{\cyr\cyrp.}%
```

Commented variant can be used in books but since it has common form for both nominative and accusative but it changes in other forms, like “of \autoref{auto}” etc.

```
2479 % \def\paragraphautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%
2480 % \def\subparagraphautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%
```

The name of verbatim line. Here could be a standard of the abbreviation (used very rare). But the author preprint publications (which have not any editor or corrector) can use this abbreviation for the page reference. So the meaning of the line reference can be read as reference to the page.

```
2481 \def\FancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr.}%
```

Commented names of the “verbatim line”: have different forms, also the nominative and accusative.

```
2482 % \def\NomFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyra}%
```

```
2483 % \def\AccFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyru}%
```

The alternative, ve-e-e-ery professional abbreviation, was used in typography markup for typesetters.

```
2484 % \def\FancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyrk.}%
```

The names of theorem: if we want have “the good face of the book”, so the theorem reference must have the full name (like equation reference). But ...

```
2485 \def\theoremautorefname{\cyr\cyrt\cyre\cyro\cyrr.}%
```

Commented forms of the “theorem”: have different forms, also the nominative and accusative.

```
2486 % \def\Nomtheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyra}%
```

```
2487 % \def\Acctheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyru}%
```

Name of the page stable (standard) abbreviation form. No problem.

```
2488 \def\pageautorefname{\cyr\cyrs.}%
```

```
2489 }
```

```
2490 \def\HyLang@spanish{%
```

```
2491 \def\equationautorefname{Ecuaci\'}on}%
```

```
2492 \def\footnoteautorefname{Nota a pie de p\'}agina}%
```

```
2493 \def\itemautorefname{Elemento}%
```

```
2494 \def\figureautorefname{Figura}%
```

```
2495 \def\tableautorefname{Tabla}%
```

```
2496 \def\partautorefname{Parte}%
```

```
2497 \def\appendixautorefname{Ap\'}endice}%
```

```
2498 \def\chapterautorefname{Cap\'}itulo}%
```

```
2499 \def\sectionautorefname{Secci\'}on}%
```

```
2500 \def\subsectionautorefname{Subsecci\'}on}%
```

```
2501 \def\subsubsectionautorefname{Subsubsecci\'}on}%
```

```
2502 \def\paragraphautorefname{P\'}arrafo}%
```

```
2503 \def\subparagraphautorefname{Subp\'}arrafo}%
```

```
2504 \def\FancyVerbLineautorefname{L\'}inea}%
```

```
2505 \def\theoremautorefname{Teorema}%
```

```
2506 \def\pageautorefname{P\'}agina}%
```

```
2507 }
```

```
2508 \def\HyLang@vietnamese{%
```

```
2509 \def\equationautorefname{Ph\}uhorn{\}ohorn{\}ng tr\'}inh}%
```

```
2510 \def\footnoteautorefname{Ch\'}u th\'}ich}%
```

```
2511 \def\itemautorefname{m\}d\}u\}c}%
```

```
2512 \def\figureautorefname{H\'}inh}%
```

```
2513 \def\tableautorefname{B\}h\}a\}ng}%
```

```
2514 \def\partautorefname{Ph\'}acircumflex{\}n}%
```

```
2515 \def\appendixautorefname{Ph\}d\}u\} l\}d\}u\}c}%
```

```
2516 \def\chapterautorefname{ch\}uhorn{\}ohorn{\}ng}%
```

```
2517 \def\sectionautorefname{m\}d\}u\}c}%
```

```
2518 \def\subsectionautorefname{m\}d\}u\}c}%
```

```
2519 \def\subsubsectionautorefname{m\}d\}u\}c}%
```

```
2520 \def\paragraphautorefname{\}d\}j\}o\}d\}a\}n}%
```

```

2521 \def\subparagraphautorefname{\dj{}o{d{a}n}%
2522 \def\FancyVerbLineautorefname{d\'ong}%
2523 \def\theoremautorefname{\DJ{}{d{i}nh 1\'y}%
2524 \def\pageautorefname{Trang}%
2525 }

```

Instead of package babel's definition of \addto the implementation of package varioref is used. Additionally argument #1 is checked for \relax.

```

2526 \def\HyLang@addto#1#2{%
2527   #2%
2528   \@temptokena{#2}%
2529   \ifx#1\relax
2530     \let#1\@empty
2531   \fi
2532   \ifx#1\undefined
2533     \edef#1{\the\@temptokena}%
2534   \else
2535     \toks@\expandafter{#1}%
2536     \edef#1{\the\toks@\the\@temptokena}%
2537   \fi
2538   \@temptokena{}\toks@\@temptokena
2539 }

2540 \def\HyLang@DeclareLang#1#2#3{%
2541   \begingroup
2542     \edef\x##1##2{%
2543       \noexpand\ifx##2\relax
2544         \errmessage{No definitions for language #2' found!}%
2545       \noexpand\fi
2546     \endgroup
2547     \noexpand\define@key{Hyp}{#1}[]{%
2548       \noexpand\HyLang@addto{\noexpand##1}{\noexpand##2}%
2549       #3%
2550     }%
2551   }%
2552   \expandafter\x\csname extras#1\expandafter\endcsname
2553     \csname HyLang@#2\endcsname
2554 }

2555 \HyLang@DeclareLang{english}{english}{}
2556 \HyLang@DeclareLang{UKenglish}{english}{}
2557 \HyLang@DeclareLang{british}{english}{}
2558 \HyLang@DeclareLang{USenglish}{english}{}
2559 \HyLang@DeclareLang{american}{english}{}
2560 \HyLang@DeclareLang{german}{german}{}
2561 \HyLang@DeclareLang{austrian}{german}{}
2562 \HyLang@DeclareLang{ngerman}{german}{}
2563 \HyLang@DeclareLang{naustrian}{german}{}
2564 \HyLang@DeclareLang{russian}{russian}{\noexpand\hypersetup{unicode}}
2565 \HyLang@DeclareLang{brazil}{portuges}{}
2566 \HyLang@DeclareLang{brazilian}{portuges}{}
2567 \HyLang@DeclareLang{portuguese}{portuges}{}
2568 \HyLang@DeclareLang{spanish}{spanish}{}
2569 \HyLang@DeclareLang{afrikaans}{afrikaans}{}
2570 \HyLang@DeclareLang{french}{french}{}
2571 \HyLang@DeclareLang{frenchb}{french}{}
2572 \HyLang@DeclareLang{francais}{french}{}
2573 \HyLang@DeclareLang{acadian}{french}{}
2574 \HyLang@DeclareLang{canadien}{french}{}

```

```

2575 \HyLang@DeclareLang{italian}{italian}{%
2576 \HyLang@DeclareLang{magyar}{magyar}{%
2577 \HyLang@DeclareLang{hungarian}{magyar}{%

```

More work is needed in case of options vietnamese and vietnam.

```

2578 \define@key{Hyp}{vietnamese}[]{%
2579 \HyLang@addto\extrasvietnamese\HyLang@vietnamese
2580 \AtEndOfPackage{%
2581 \ifundefined{T@PU}{%
2582 \input{puvnenc.def}%
2583 }%
2584 }%
2585 }
2586 \define@key{Hyp}{vietnam}[]{%
2587 \HyLang@addto\extravietnam\HyLang@vietnamese
2588 \AtEndOfPackage{%
2589 \ifundefined{T@PU}{%
2590 \input{puvnenc.def}%
2591 }%
2592 }%
2593 }

```

Similar for option arabic that just loads the additions to PU encoding for Arabi.

```

2594 \define@key{Hyp}{arabic}[]{%
2595 \AtEndOfPackage{%
2596 \ifundefined{T@PU}{%
2597 \input{puarenc.def}%
2598 }%
2599 }%
2600 }

```

13 Options to change appearance of links

Colouring links at the L^AT_EX level is useful for debugging, perhaps.

```

2601 \define@key{Hyp}{colorlinks}[true]{%
2602 \Hy@boolkey{colorlinks}{#1}%
2603 }
2604 \define@key{Hyp}{ocgcolorlinks}[true]{%
2605 \Hy@boolkey{ocgcolorlinks}{#1}%
2606 }
2607 \AtBeginDocument{%
2608 \begingroup
2609 \ifundefined{OBJ@OCG@view}{%
2610 \ifHy@ocgcolorlinks
2611 \Hy@Warning{%
2612 Driver does not support ‘ocgcolorlinks’,\MessageBreak
2613 using ‘colorlinks’ instead%
2614 }%
2615 \fi
2616 }{}%
2617 \endgroup
2618 }
2619 \define@key{Hyp}{frenchlinks}[true]{%
2620 \Hy@boolkey{frenchlinks}{#1}%
2621 }

```


14 Bookmarking

```

2622 \define@key{Hyp}{bookmarks}[true]{%
2623   \Hy@boolkey{bookmarks}{#1}%
2624 }

2625 \define@key{Hyp}{bookmarksopen}[true]{%
2626   \Hy@boolkey{bookmarksopen}{#1}%
2627 }

```

The depth of the outlines is controlled by option `bookmarksdepth`. The option acts globally and distinguishes three cases:

- `bookmarksdepth`: Without value `hyperref` uses counter `tocdepth` (compatible behaviour and default).
- `bookmarksdepth=<number>`: the depth is set to `<number>`.
- `bookmarksdepth=<name>`: The `<name>` must not start with a number or minus sign. It is a document division name (part, chapter, section, ...). Internally the value of macro `\toclevel@<name>` is used.

```

2628 \let\Hy@bookmarksdepth\c@tocdepth
2629 \define@key{Hyp}{bookmarksdepth}[]{%
2630   \begingroup
2631     \edef\x{#1}%
2632     \ifx\x\empty
2633       \global\let\Hy@bookmarksdepth\c@tocdepth
2634     \else
2635       \@ifundefined{toclevel@\x}{%
2636         \@onelevel@sanitize\x
2637         \edef\y{\expandafter\@car\x\@nil}%
2638         \ifcase 0\expandafter\ifx\y-1\fi
2639           \expandafter\ifnum\expandafter'\y>47 %
2640             \expandafter\ifnum\expandafter'\y<58 1\fi\fi\relax
2641           \Hy@Warning{Unknown document division name (\x)}%
2642         \else
2643           \setbox\z@=\hbox{%
2644             \count@=\x
2645             \xdef\Hy@bookmarksdepth{\the\count@}%
2646           }%
2647         \fi
2648       }{%
2649         \setbox\z@=\hbox{%
2650           \count@=\csname toclevel@\x\endcsname
2651           \xdef\Hy@bookmarksdepth{\the\count@}%
2652         }%
2653       }%
2654     \fi
2655   \endgroup
2656 }

```

‘`bookmarksopenlevel`’ to specify the open level. From Heiko Oberdiek.

```

2657 \define@key{Hyp}{bookmarksopenlevel}{%
2658   \def\@bookmarksopenlevel{#1}%
2659 }

2660 \def\@bookmarksopenlevel{\maxdimen}
2661 % ‘bookmarkstype’ to specify which ‘toc’ file to mimic
2662 \define@key{Hyp}{bookmarkstype}{%
2663   \def\Hy@bookmarkstype{#1}%

```

```

2664 }
2665 \def\Hy@bookmarkstype{toc}

```

Richard Curnow richard@curnow.demon.co.uk suggested this functionality. It adds section numbers etc to bookmarks.

```

2666 \define@key{Hyp}{bookmarksnumbered}[true]{%
2667   \Hy@boolkey{bookmarksnumbered}{#1}%
2668 }

```

Option CJKbookmarks enables the patch for CJK bookmarks.

```

2669 \define@key{Hyp}{CJKbookmarks}[true]{%
2670   \Hy@boolkey{CJKbookmarks}{#1}%
2671 }

2672 \def\Hy@temp#1{%
2673   \expandafter\Hy@@temp\csname @#1color\endcsname{#1}%
2674 }
2675 \def\Hy@@temp#1#2#3{%
2676   \define@key{Hyp}{#2color}{%
2677     \HyColor@HyperrefColor{##1}{#1}%
2678   }%
2679   \def#1{#3}%
2680 }
2681 \Hy@temp{link}{red}
2682 \Hy@temp{anchor}{black}
2683 \Hy@temp{cite}{green}
2684 \Hy@temp{file}{cyan}
2685 \Hy@temp{url}{magenta}
2686 \Hy@temp{menu}{red}
2687 \Hy@temp{run}{\@filecolor}
2688 \define@key{Hyp}{pagecolor}{%
2689   \Hy@WarningPageColor
2690 }
2691 \def\Hy@WarningPageColor{%
2692   \Hy@WarningNoLine{Option 'pagecolor' is not available anymore}%
2693   \global\let\Hy@WarningPageColor\relax
2694 }

2695 \def\hyperbaseurl#1{\def\@baseurl{#1}}
2696 \define@key{Hyp}{baseurl}{\hyperbaseurl{#1}}
2697 \let\@baseurl\empty
2698 \def\hyperlinkfileprefix#1{\def\Hy@linkfileprefix{#1}}
2699 \define@key{Hyp}{linkfileprefix}{\hyperlinkfileprefix{#1}}
2700 \hyperlinkfileprefix{file:}

```

15 PDF-specific options

`\@pdfpagetransition` The value of option pdfpagetransition is stored in \@pdfpagetransition. Its initial value is set to \relax in order to be able to differentiate between a not used option and an option with an empty value.

```

2701 \let\@pdfpagetransition\relax
2702 \define@key{Hyp}{pdfpagetransition}{\def\@pdfpagetransition{#1}}

```

`\@pdfpageduration` The value of option pdfpageduration is stored in \@pdfpageduration. Its initial value is set to \relax in order to be able to differentiate between a not used option and an option with an empty value.

```

2703 \let\@pdfpageduration\relax
2704 \define@key{Hyp}{pdfpageduration}{\def\@pdfpageduration{#1}}

```

The entry for the /Hid key in the page object is only necessary, if it is used and set to true for at least one time. If it is always false, then the /Hid key is not written to the pdf page object in order not to enlarge the pdf file.

```

2705 \newif\ifHy@useHidKey
2706 \Hy@useHidKeyfalse
2707 \define@key{Hyp}{pdfpagehidden}[true]{%
2708   \Hy@boolkey{pdfpagehidden}{#1}%
2709   \ifHy@pdfpagehidden
2710     \global\Hy@useHidKeytrue
2711   \fi
2712 }

```

The value of the bordercolor options are not processed by the color package. Therefore the value consists of space separated rgb numbers in the range 0 until 1.

Package xcolor provides \XC@bordercolor since version 1.1. If the two spaces in the color specification are missing, then the value is processed as color specification from package xcolor by using \XC@bordercolor (since xcolor 2004/05/09 v1.11, versions 2005/03/24 v2.02 until 2006/11/28 v2.10 do not work because of a bug that is fixed in 2007/01/21 v2.11).

```

2713 \def\Hy@ColorList{cite,file,link,menu,run,url}
2714 \@for\Hy@temp:=\Hy@ColorList\do{%
2715   \edef\Hy@temp{%
2716     \noexpand\define@key{Hyp}{\Hy@temp bordercolor}{%
2717       \noexpand\HyColor@HyperrefBorderColor
2718       {##1}%
2719       \expandafter\noexpand\csname @\Hy@temp bordercolor\endcsname
2720       {hyperref}%
2721       {\Hy@temp bordercolor}%
2722     }%
2723   }%
2724   \Hy@temp
2725 }
2726 \define@key{Hyp}{pagebordercolor}{%
2727   \Hy@WarningPageBorderColor
2728 }
2729 \def\Hy@WarningPageBorderColor{%
2730   \Hy@WarningNoLine{Option 'pagebordercolor' is not available anymore}%
2731   \global\let\Hy@WarningPageBorderColor\relax
2732 }
2733 \define@key{Hyp}{pdfhighlight}{\def\@pdfhighlight{#1}}
2734 \Hy@DefNameKey{pdfhighlight}{%
2735   \do{/I}{Invert}%
2736   \do{/N}{None}%
2737   \do{/O}{Outline}%
2738   \do{/P}{Push}%
2739 }
2740 \define@key{Hyp}{pdfborder}{\def\@pdfborder{#1}}
2741 \define@key{Hyp}{pdfborderstyle}{\def\@pdfborderstyle{#1}}
2742 \def\Hy@setpdfborder{%
2743   \ifx\@pdfborder\@empty
2744     \else
2745       /Border[\@pdfborder]%
2746     \fi
2747   \ifx\@pdfborderstyle\@empty
2748     \else
2749       /BS<<\@pdfborderstyle>>%
2750     \fi

```

```

2751 }
2752 \Hy@DefNameKey{pdfpagemode}{%
2753   \do{UseNone}{}%
2754   \do{UseOutlines}{}%
2755   \do{UseThumbs}{}%
2756   \do{FullScreen}{}%
2757   \do{UseOC}{PDF 1.5}%
2758   \do{UseAttachments}{PDF 1.6}%
2759 }
2760 \Hy@DefNameKey{pdfnonfullscreenpagemode}{%
2761   \do{UseNone}{}%
2762   \do{UseOutlines}{}%
2763   \do{UseThumbs}{}%
2764   \do{FullScreen}{}%
2765   \do{UseOC}{PDF 1.5}%
2766   \do{UseAttachments}{PDF 1.6}%
2767 }
2768 \Hy@DefNameKey{pdfdirection}{%
2769   \do{L2R}{Left to right}%
2770   \do{R2L}{Right to left}%
2771 }
2772 \Hy@DefNameKey{pdfviewarea}{%
2773   \do{MediaBox}{}%
2774   \do{CropBox}{}%
2775   \do{BleedBox}{}%
2776   \do{TrimBox}{}%
2777   \do{ArtBox}{}%
2778 }
2779 \Hy@DefNameKey{pdfviewclip}{%
2780   \do{MediaBox}{}%
2781   \do{CropBox}{}%
2782   \do{BleedBox}{}%
2783   \do{TrimBox}{}%
2784   \do{ArtBox}{}%
2785 }
2786 \Hy@DefNameKey{pdfprintarea}{%
2787   \do{MediaBox}{}%
2788   \do{CropBox}{}%
2789   \do{BleedBox}{}%
2790   \do{TrimBox}{}%
2791   \do{ArtBox}{}%
2792 }
2793 \Hy@DefNameKey{pdfprintclip}{%
2794   \do{MediaBox}{}%
2795   \do{CropBox}{}%
2796   \do{BleedBox}{}%
2797   \do{TrimBox}{}%
2798   \do{ArtBox}{}%
2799 }
2800 \Hy@DefNameKey{pdfprintscaling}{%
2801   \do{AppDefault}{}%
2802   \do{None}{}%
2803 }
2804 \Hy@DefNameKey{pdfduplex}{%
2805   \do{Simplex}{}%
2806   \do{DuplexFlipShortEdge}{}%
2807   \do{DuplexFlipLongEdge}{}%

```

```

2808 }
2809 \Hy@DefNameKey{pdfpicktraybypdfsize}{%
2810   \do{true}{}%
2811   \do{false}{}%
2812 }
2813 \define@key{Hyp}{pdfprintpagerange}{%
2814   \def\@pdfprintpagerange{#1}%
2815 }
2816 \Hy@DefNameKey{pdfnumcopies}{%
2817   \do{2}{two copies}%
2818   \do{3}{three copies}%
2819   \do{4}{four copies}%
2820   \do{5}{five copies}%
2821 }
2822 \define@key{Hyp}{pdfusetitle}[true]{%
2823   \Hy@boolkey[pdfusetitle]{usetitle}{#1}%
2824 }
2825 \define@key{Hyp}{pdftitle}{\pdfstringdef\@pdftitle{#1}}
2826 \define@key{Hyp}{pdfauthor}{\pdfstringdef\@pdfauthor{#1}}
2827 \define@key{Hyp}{pdfproducer}{\pdfstringdef\@pdfproducer{#1}}
2828 \define@key{Hyp}{pdfcreator}{\pdfstringdef\@pdfcreator{#1}}
2829 \define@key{Hyp}{pdfcreationdate}{%
2830   \begingroup
2831     \Hy@unicodedefalse
2832     \pdfstringdef\@pdfcreationdate{#1}%
2833   \endgroup
2834 }
2835 \define@key{Hyp}{pdfmoddate}{%
2836   \begingroup
2837     \Hy@unicodedefalse
2838     \pdfstringdef\@pdfmoddate{#1}%
2839   \endgroup
2840 }
2841 \define@key{Hyp}{pdfsubject}{\pdfstringdef\@pdfsubject{#1}}
2842 \define@key{Hyp}{pdfkeywords}{\pdfstringdef\@pdfkeywords{#1}}
2843 \define@key{Hyp}{pdfview}{\calculate@pdfview#1 \\\}
2844 \define@key{Hyp}{pdflinkmargin}{\setpdflinkmargin{#1}}
2845 \let\setpdflinkmargin\@gobble
2846 \def\calculate@pdfview#1 #2\{%
2847   \def\@pdfview{#1}%
2848   \ifx\#2\%
2849     \def\@pdfviewparams{ -32768}%
2850   \else
2851     \def\@pdfviewparams{ #2}%
2852   \fi
2853 }
2854 \begingroup\expandafter\expandafter\expandafter\endgroup
2855 \expandafter\ifx\csname numexpr\endcsname\relax
2856   \def\Hy@number#1{%
2857     \expandafter\@firstofone\expandafter{\number#1}%
2858   }%
2859 \else
2860   \def\Hy@number#1{%
2861     \the\numexpr#1\relax
2862   }%
2863 \fi
2864 \define@key{Hyp}{pdfstartpage}{%

```

```

2865 \ifx\#1\%
2866 \def\@pdfstartpage{%
2867 \else
2868 \edef\@pdfstartpage{\Hy@number{#1}}%
2869 \fi
2870 }%
2871 \define@key{Hyp}{pdfstartview}{%
2872 \ifx\#1\%
2873 \def\@pdfstartview{%
2874 \else
2875 \hypercalcbpdef\@pdfstartview{ /#1 }%
2876 \fi
2877 }
2878 \define@key{Hyp}{pdfpagescrop}{\edef\@pdfpagescrop{#1}}
2879 \define@key{Hyp}{pdftoolbar}[true]{%
2880 \Hy@boolkey[pdftoolbar]{toolbar}{#1}%
2881 }
2882 \define@key{Hyp}{pdfmenubar}[true]{%
2883 \Hy@boolkey[pdfmenubar]{menubar}{#1}%
2884 }
2885 \define@key{Hyp}{pdfwindowui}[true]{%
2886 \Hy@boolkey[pdfwindowui]{windowui}{#1}%
2887 }
2888 \define@key{Hyp}{pdffitwindow}[true]{%
2889 \Hy@boolkey[pdffitwindow]{fitwindow}{#1}%
2890 }
2891 \define@key{Hyp}{pdfcenterwindow}[true]{%
2892 \Hy@boolkey[pdfcenterwindow]{centerwindow}{#1}%
2893 }
2894 \define@key{Hyp}{pdfdisplaydoctitle}[true]{%
2895 \Hy@boolkey[pdfdisplaydoctitle]{displaydoctitle}{#1}%
2896 }
2897 \define@key{Hyp}{pdfa}[true]{%
2898 \Hy@boolkey[pdfa]{#1}%
2899 }
2900 \define@key{Hyp}{pdfnewwindow}[true]{%
2901 \def\Hy@temp{#1}%
2902 \ifx\Hy@temp\@empty
2903 \Hy@newwindowsetfalse
2904 \else
2905 \Hy@newwindowsettrue
2906 \Hy@boolkey[pdfnewwindow]{newwindow}{#1}%
2907 \fi
2908 }
2909 \def\Hy@SetNewWindow{%
2910 \ifHy@newwindowset
2911 /NewWindow %
2912 \ifHy@newwindow true\else false\fi
2913 \fi
2914 }
2915 \Hy@DefNameKey{pdfpagelayout}{%
2916 \do{SinglePage}{}%
2917 \do{OneColumn}{}%
2918 \do{TwoColumnLeft}{}%
2919 \do{TwoColumnRight}{}%
2920 \do{TwoPageLeft}{PDF 1.5}%
2921 \do{TwoPageRight}{PDF 1.5}%

```

```

2922 }
2923 \define@key{Hyp}{pdflang}{%
2924   \def\@pdflang{#1}%
2925 }
2926 \define@key{Hyp}{pdfpagelabels}[true]{%
2927   \Hy@boolkey[pdfpagelabels]{pagelabels}{#1}%
2928 }
2929 \define@key{Hyp}{pdfescapeform}[true]{%
2930   \Hy@boolkey[pdfescapeform]{escapeform}{#1}%
2931 }

```

Default values:

```

2932 \def\@linkbordercolor{1 0 0}
2933 \def\@urlbordercolor{0 1 1}
2934 \def\@menubordercolor{1 0 0}
2935 \def\@filebordercolor{0 .5 .5}
2936 \def\@runbordercolor{0 .7 .7}
2937 \def\@citebordercolor{0 1 0}
2938 \def\@pdfhighlight{/I}
2939 \def\@pdftitle{}
2940 \def\@pdfauthor{}
2941 \let\@pdfproducer\relax
2942 \def\@pdfcreator{LaTeX with hyperref package}
2943 \def\@pdfcreationdate{}
2944 \def\@pdfmoddate{}
2945 \def\@pdfsubject{}
2946 \def\@pdfkeywords{}
2947 \def\@pdfpagescrop{}
2948 \def\@pdfstartview{ /Fit }
2949 \def\@pdfstartpage{1}
2950 \def\@pdfprintpagerange{}
2951 \def\@pdflang{}
2952 \let\PDF@SetupDoc\@empty
2953 \let\PDF@FinishDoc\@empty
2954 \let\phantomsection\@empty
2955 \let\special@paper\@empty
2956 \def\HyperDestNameFilter#1{#1}
2957 \@ifundefined{stockwidth}{%
2958   \ifdim\paperwidth>\z@
2959     \ifdim\paperheight>\z@
2960       \edef\special@paper{\the\paperwidth,\the\paperheight}%
2961     \fi
2962   \fi
2963 }{%
2964   \ifdim\stockwidth>\z@
2965     \ifdim\stockheight>\z@
2966       \edef\special@paper{\the\stockwidth,\the\stockheight}%
2967     \fi
2968   \fi
2969 }
2970 \begingroup
2971 \edef\x{\@ifundefined{stockheight}\paperheight\stockheight}%
2972 \dimen@=\x\relax
2973 \ifdim\dimen@>\z@
2974   \else
2975     \dimen@=11in\relax
2976     \Hy@WarningNoLine{%
2977       Height of page (\expandafter\string\x) %

```

```

2978         is invalid (\the\x),\MessageBreak
2979         using 11in%
2980     }%
2981 \fi
2982 \dimen@=0.99626401\dimen@
2983 \xdef\Hy@pageheight{\strip@pt\dimen@}%
2984 \endgroup
2985 \def\HyInd@EncapChar{\\}
2986 \def\hypersetup{\setkeys{Hyp}}

```

Allow the user to use `\ExecuteOptions` in the `cfg` file even though this package does not use the normal option mechanism. Use `\hyper@normalise` as a scratch macro, since it is going to be defined in a couple of lines anyway.

```

2987 \let\hyper@normalise\ExecuteOptions
2988 \let\ExecuteOptions\hypersetup
2989 \Hy@RestoreCatcodes
2990 \InputIfFileExists{hyperref.cfg}{-}{-}
2991 \Hy@SetCatcodes
2992 \let\ExecuteOptions\hyper@normalise
2993 \Hy@MaybeStopNow

```

To add flexibility, we will not use the ordinary processing of package options, but put them through the *keyval* package. This section was written by David Carlisle.

Package `kvoptions` is used for processing options that are given as key value pairs. The package provides `\ProcessKeyvalOptions`, formerly known as `\ProcessOptionsWithKV`.

```

2994 \RequirePackage{kvoptions}[2006/08/17]

```

Add option `tex4ht` if package `tex4ht` is loaded.

```

2995 \@ifpackageloaded{tex4ht}{%
2996   \@ifpackagewith{hyperref}{tex4ht}{-}{-}%
2997   \PassOptionsToPackage{tex4ht}{hyperref}%
2998 }%
2999 }{-}

3000 \let\ReadBookmarks\relax
3001 \ProcessKeyvalOptions{Hyp}

```

After processing options.

```

3002 \AtBeginDocument{%
3003   \ifHy@draft
3004     \let\hyper@@anchor@gobble
3005     \gdef\hyper@link#1#2#3{#3}%
3006     \let\hyper@anchorstart@gobble
3007     \let\hyper@anchorend@empty
3008     \let\hyper@linkstart@gobbletwo
3009     \let\hyper@linkend@empty
3010     \def\hyper@linkurl#1#2{#1}%
3011     \def\hyper@linkfile#1#2#3{#1}%
3012     \def\hyper@link@{#1}#2#3{#1}%
3013     \def\Acrobatmenu#1#2{\leavevmode#2}%
3014     \let\PDF@SetupDoc@empty
3015     \let\PDF@FinishDoc@empty
3016     \let\@fifthoffive\@secondoftwo
3017     \let\@secondoffive\@secondoftwo
3018     \let\ReadBookmarks\relax
3019     \let\WriteBookmarks\relax
3020     \Hy@WarningNoLine{ draft mode on}%
3021   \fi

```



```

3022 \Hy@DisableOption{draft}%
3023 \Hy@DisableOption{nolinks}%
3024 \Hy@DisableOption{final}%
3025 }

```

15.1 PDF/A

```

3026 \Hy@DisableOption{pdfa}
3027 \ifHy@pdfa
3028   \setkeys{Hyp}{pdfversion=1.4}%
3029   \def\Hy@Acrobatmenu#1#2{%
3030     \leavevmode
3031     \begingroup
3032     \edef\x{#1}%
3033     \@onelevel@sanitize\x
3034     \ifx\x\Hy@NextPage
3035       \let\y=Y%
3036     \else
3037       \ifx\x\Hy@PrevPage
3038         \let\y=Y%
3039       \else
3040         \ifx\x\Hy@FirstPage
3041           \let\y=Y%
3042         \else
3043           \ifx\x\Hy@LastPage
3044             \let\y=Y%
3045           \else
3046             \let\y=N%
3047           \fi
3048         \fi
3049       \fi
3050     \fi
3051     \expandafter\endgroup
3052     \ifx\y Y%
3053     \else
3054       \PackageError{hyperref}{%
3055         PDF/A: Named action ‘#1’ is not permitted%
3056       }\@ehc
3057       {#2}%
3058     \expandafter\@gobble
3059     \fi
3060   }%
3061   \def\Hy@temp#1{%
3062     \expandafter\def\csname Hy@#1\endcsname{#1}%
3063     \expandafter\@onelevel@sanitize\csname Hy@#1\endcsname
3064   }%
3065   \Hy@temp{NextPage}%
3066   \Hy@temp{PrevPage}%
3067   \Hy@temp{FirstPage}%
3068   \Hy@temp{LastPage}%
3069 \else
3070   \def\Hy@Acrobatmenu#1#2{\leavevmode}%
3071 \fi

```

15.2 Patch for babel's \texttilde

Babel does not define \texttilde in NFSS2 manner, so the NFSS2 definitions of PD1 or PU encoding is not compatible. To fix this, \texttilde is defined in babel manner.

```
3072 \Hy@nextfalse
3073 \@ifundefined{spanish@sh@"@sel}{\Hy@nexttrue}
3074 \@ifundefined{galician@sh@"@sel}{\Hy@nexttrue}
3075 \@ifundefined{estonian@sh@"@sel}{\Hy@nexttrue}
3076 \ifHy@next
3077   \let\texttilde\~%
3078 \fi
```

15.3 Patch for babel 3.8j

Babel 2008/03/16 v3.8j adds a patch to disable shorthands for bookmarks. That reduces warnings, but the bookmarks are ugly. Therefore the following patch tries to undo this.

```
3079 \@ifpackageloaded{babel}{%
3080   \@ifpackagelater{babel}{2008/03/16}{%
3081     \def\Hy@PatchLanguageShorthands#1{%
3082       \begingroup
3083         \edef\x{#1}%
3084         \@onelevel@sanitize\x
3085         \def\y{system}%
3086         \@onelevel@sanitize\y
3087       \expandafter\endgroup
3088       \ifx\x\y
3089         \else
3090           \HyOrg@languageshorthands{#1}%
3091         \fi
3092     }%
3093   \AtBeginDocument{%
3094     \begingroup
3095       \toks0=\expandafter{\pdfstringdefPreHook}%
3096       \xdef\pdfstringdefPreHook{%
3097         \let\noexpand\HyOrg@languageshorthands
3098         \noexpand\languageshorthands
3099         \let\noexpand\languageshorthands
3100         \noexpand\Hy@PatchLanguageShorthands
3101         \the\toks0 %
3102         \let\noexpand\languageshorthands
3103         \noexpand\HyOrg@languageshorthands
3104       }%
3105     \endgroup
3106   }%
3107 }{}%
3108 }{}

3109 \ifHy@figures
3110   \Hy@Info{Hyper figures ON}%
3111 \else
3112   \Hy@Info{Hyper figures OFF}%
3113 \fi
3114 \ifHy@nesting
3115   \Hy@Info{Link nesting ON}%
3116 \else
3117   \Hy@Info{Link nesting OFF}%
3118 \fi
```

```

3119 \ifHy@hyperindex
3120   \Hy@Info{Hyper index ON}%
3121 \else
3122   \Hy@Info{Hyper index OFF}%
3123 \fi
3124 \ifHy@plainpages
3125   \Hy@Info{Plain pages ON}%
3126 \else
3127   \Hy@Info{Plain pages OFF}%
3128 \fi
3129 \ifHy@backref
3130   \Hy@Info{Backreferencing ON}%
3131 \else
3132   \Hy@Info{Backreferencing OFF}%
3133 \fi
3134 \ifHy@typexml
3135   \AtEndOfPackage{%
3136     \RequirePackage{color}%
3137     \RequirePackage{nameref}%
3138   }%
3139 \fi
3140 \Hy@DisableOption{typexml}
3141 \ifHy@implicit
3142   \typeout{Implicit mode ON; LaTeX internals redefined}%
3143 \else
3144   \typeout{Implicit mode OFF; no redefinition of LaTeX internals}%
3145   \def\MaybeStopEarly{%
3146     \typeout{Hyperref stopped early}%
3147     \AfterBeginDocument{%
3148       \PDF@FinishDoc
3149       \gdef\PDF@FinishDoc{}%
3150     }%
3151     \endinput
3152   }%
3153   \AtBeginDocument{%
3154     \let\autoref\ref
3155     \let\autopageref\pageref
3156     \ifx\@pdfpagemode\@empty
3157       \gdef\@pdfpagemode{UseNone}%
3158     \fi
3159     \global\Hy@backreffalse
3160   }%
3161   \AtEndOfPackage{%
3162     \global\let\ReadBookmarks\relax
3163     \global\let\WriteBookmarks\relax
3164   }%
3165 \fi
3166 \Hy@DisableOption{implicit}

```

15.3.1 Driver loading

```

3167 \AtEndOfPackage{%
3168   \@ifpackageloaded{tex4ht}{%
3169     \def\Hy@driver{htex4ht}%
3170     \Hy@texhttrue
3171   }{}%

```

Some drivers can be detected. Check for these drivers, whether the given driver option is ok. Otherwise force the right driver or use the default driver.

```

3172 \ifx\Hy@driver\@empty
3173 \else
3174   \def\Hy@temp{hpdtex}%
3175   \ifpdf
3176     \ifx\Hy@driver\Hy@temp
3177     \else
3178       \Hy@WarningNoLine{%
3179         Wrong driver '\Hy@driver.def';\MessageBreak
3180         pdfTeX is running in PDF mode.\MessageBreak
3181         Forcing driver '\Hy@temp.def'%
3182       }%
3183     \let\Hy@driver\Hy@temp
3184   \fi
3185 \else
3186   \ifx\Hy@driver\Hy@temp
3187   \Hy@WarningNoLine{%
3188     Wrong driver '\Hy@driver.def';\MessageBreak
3189     pdfTeX is not running in PDF mode.\MessageBreak
3190     Using default driver%
3191   }%
3192   \let\Hy@driver\@empty
3193 \fi
3194 \fi
3195 \fi
3196 \ifx\Hy@driver\@empty
3197 \else
3198   \def\Hy@temp{hdvipdfm}%
3199   \ifxetex
3200     \ifx\Hy@driver\Hy@temp
3201     \else
3202       \Hy@WarningNoLine{%
3203         Wrong driver '\Hy@driver.def';\MessageBreak
3204         XeTeX is running.\MessageBreak
3205         Forcing driver '\Hy@temp.def' for XeTeX%
3206       }%
3207     \let\Hy@driver\Hy@temp
3208   \fi
3209 \fi
3210 \fi
3211 \ifx\Hy@driver\@empty
3212 \else
3213   \def\Hy@temp{hvtexhtm}%
3214   \ifvtexhtml
3215     \ifx\Hy@driver\Hy@temp
3216     \else
3217       \Hy@WarningNoLine{%
3218         Wrong driver '\Hy@driver.def';\MessageBreak
3219         VTeX is running in HTML mode.\MessageBreak
3220         Forcing driver '\Hy@temp.def'%
3221       }%
3222     \let\Hy@driver\Hy@temp
3223   \fi
3224 \else
3225   \ifx\Hy@driver\Hy@temp
3226     \Hy@WarningNoLine{%

```

```

3227         Wrong driver '\Hy@driver.def';\MessageBreak
3228         VTeX is not running in HTML mode.\MessageBreak
3229         Using default driver%
3230     }%
3231     \let\Hy@driver\@empty
3232 \fi
3233 \fi
3234 \fi

```

If the driver is not given, find the right driver or use the default driver.

```

3235 \ifx\Hy@driver\@empty
3236   \providecommand*{\Hy@defaultdriver}{hypertex}%
3237   \ifpdf
3238     \def\Hy@driver{hpdftex}%
3239   \else
3240     \ifxetex
3241       \def\Hy@driver{hdvipdfm}%
3242     \else
3243       \ifvtexhtml
3244         \def\Hy@driver{hvtexhtm}%
3245         \def\MaybeStopEarly{%
3246           \typeout{Hyperref stopped early}%
3247           \AfterBeginDocument{%
3248             \PDF@FinishDoc
3249             \gdef\PDF@FinishDoc{}}%
3250         }%
3251         \endinput
3252       }%
3253     \else
3254       \ifvtexpdf
3255         \def\Hy@driver{hvtex}%
3256       \else
3257         \ifvtexps
3258           \def\Hy@driver{hvtex}%
3259         \else
3260           \let\Hy@driver\Hy@defaultdriver
3261         \fi
3262       \fi
3263     \fi
3264   \fi
3265 \fi
3266 \ifx\Hy@driver\Hy@defaultdriver
3267   \def\Hy@temp{hdviwind}%
3268   \ifx\Hy@temp\Hy@driver
3269     \setkeys{Hyp}{colorlinks}%
3270     \PassOptionsToPackage{dviwindo}{color}%
3271   \fi
3272 \fi
3273 \typeout{*hyperref using default driver \Hy@driver*}%
3274 \else
3275   \typeout{*hyperref using driver \Hy@driver*}%
3276 \fi
3277 \input{\Hy@driver.def}%
3278 \let\@unprocessedoptions\relax
3279 \Hy@RestoreCatcodes
3280 }
3281 \newif\ifHy@DvipdfmxOutlineOpen
3282 \begingroup\expandafter\expandafter\expandafter\endgroup

```

```

3283 \expandafter\ifx\csname SpecialDvipdfmxOutlineOpen\endcsname\relax
3284 \else
3285   \ifnum\SpecialDvipdfmxOutlineOpen>\z@
3286     \Hy@DvipdfmxOutlineOpentruetrue
3287   \fi
3288 \fi
3289 \Hy@DisableOption{tex4ht}
3290 \Hy@DisableOption{pdftex}
3291 \Hy@DisableOption{nativepdf}
3292 \Hy@DisableOption{dvipdfm}
3293 \Hy@DisableOption{dvipdfmx}
3294 \Hy@DisableOption{dvipdfmx-outline-open}
3295 \Hy@DisableOption{pdfmark}
3296 \Hy@DisableOption{dvips}
3297 \Hy@DisableOption{hypertex}
3298 \Hy@DisableOption{vtex}
3299 \Hy@DisableOption{vtexpdfmark}
3300 \Hy@DisableOption{dviwindo}
3301 \Hy@DisableOption{dvipsone}
3302 \Hy@DisableOption{textures}
3303 \Hy@DisableOption{latex2html}
3304 \Hy@DisableOption{ps2pdf}
3305 \Hy@DisableOption{xetex}
3306 \AtEndOfPackage{%
3307   \Hy@DisableOption{pdfversion}%
3308 }

```

15.3.2 Bookmarks

```

3309 \def\WriteBookmarks{0}
3310 \def\@bookmarkopenstatus#1{%
3311   \ifHy@bookmarksopen

```

The purpose of the \@firstofone-number-space-construct is that no \relax will be inserted by T_EX before the \else:

```

3312   \ifnum#1<\expandafter\@firstofone\expandafter
3313     {\number\@bookmarkopenlevel} % explicit space
3314   \else
3315     -%
3316   \fi
3317 \else
3318   -%
3319 \fi
3320 }
3321 \ifHy@bookmarks
3322   \Hy@Info{Bookmarks ON}%
3323   \ifx\@pdfpagemode\@empty
3324     \def\@pdfpagemode{UseOutlines}%
3325   \fi
3326 \else
3327   \def\@bookmarkopenstatus#1{%
3328     \Hy@Info{Bookmarks OFF}%
3329     \AtEndOfPackage{%
3330       \global\let\ReadBookmarks\relax
3331       \global\let\WriteBookmarks\relax
3332     }%
3333   \ifx\@pdfpagemode\@empty
3334     \def\@pdfpagemode{UseNone}%
3335   \fi

```

```

3336 \fi
3337 \Hy@DisableOption{bookmarks}

Add wrapper for setting standard catcodes (babel's shorthands).
3338 \def\Hy@CatcodeWrapper#1{%
3339   \def\Hy@EndWrap{%
3340     \def\TMP@EnsureCode##1##2{%
3341       \edef\Hy@EndWrap{%
3342         \Hy@EndWrap
3343         \catcode##1 \the\catcode##1\relax
3344       }%
3345       \catcode##1 ##2\relax
3346     }%
3347     \TMP@EnsureCode{10}{12}% ^^J
3348     \TMP@EnsureCode{33}{12}% !
3349     \TMP@EnsureCode{34}{12}% "
3350     \TMP@EnsureCode{36}{3}% $ (math)
3351     \TMP@EnsureCode{38}{4}% & (alignment)
3352     \TMP@EnsureCode{39}{12}% '
3353     \TMP@EnsureCode{40}{12}% (
3354     \TMP@EnsureCode{41}{12}% )
3355     \TMP@EnsureCode{42}{12}% *
3356     \TMP@EnsureCode{43}{12}% +
3357     \TMP@EnsureCode{44}{12}% ,
3358     \TMP@EnsureCode{45}{12}% -
3359     \TMP@EnsureCode{46}{12}% .
3360     \TMP@EnsureCode{47}{12}% /
3361     \TMP@EnsureCode{58}{12}% :
3362     \TMP@EnsureCode{59}{12}% ;
3363     \TMP@EnsureCode{60}{12}% <
3364     \TMP@EnsureCode{61}{12}% =
3365     \TMP@EnsureCode{62}{12}% >
3366     \TMP@EnsureCode{63}{12}% ?
3367     \TMP@EnsureCode{91}{12}% [
3368     \TMP@EnsureCode{93}{12}% ]
3369     \TMP@EnsureCode{94}{7}% ^ (superscript)
3370     \TMP@EnsureCode{95}{8}% _ (subscript)
3371     \TMP@EnsureCode{96}{12}% '
3372     \TMP@EnsureCode{124}{12}% |
3373     \TMP@EnsureCode{126}{13}% ~ (active)
3374     #1\relax
3375   \Hy@EndWrap
3376 }

```

`\HyColor@UseColor` expects a macro as argument. It contains the color specification.

```

3377 \AtBeginDocument{%
3378   \ifHy@ocgcolorlinks
3379     \setkeys{Hyp}{colorlinks}%
3380     \ifHy@pdfa
3381       \Hy@Warning{%
3382         PDF/A: Optional Content Groups are prohibited,\MessageBreak
3383         using 'colorlinks' instead of 'ocgcolorlinks'%
3384       }%
3385       \Hy@ocgcolorlinksfalse
3386     \fi
3387   \fi
3388   \ifHy@ocgcolorlinks
3389     \else

```

```

3390 \Hy@DisableOption{ocgcolorlinks}%
3391 \fi
3392 \ifHy@colorlinks
3393 \def\@pdfborder{0 0 0}%
3394 \let\@pdfborderstyle\@empty
3395 \ifHy@typexml
3396 \else
3397 \Hy@CatcodeWrapper{%
3398 \RequirePackage{color}%
3399 }%
3400 \fi
3401 \def\Hy@colorlink#1{%
3402 \begingroup
3403 \HyColor@UseColor#1%
3404 }%
3405 \def\Hy@endcolorlink{\endgroup}%
3406 \Hy@Info{Link coloring ON}%
3407 \else
3408 \ifHy@frenchlinks
3409 \def\Hy@colorlink#1{\begingroup\fontshape{sc}\selectfont}%
3410 \def\Hy@endcolorlink{\endgroup}%
3411 \Hy@Info{French linking ON}%
3412 \else
for grouping consistency:
3413 \def\Hy@colorlink#1{\begingroup}%
3414 \def\Hy@endcolorlink{\endgroup}%
3415 \Hy@Info{Link coloring OFF}%
3416 \fi
3417 \fi
3418 \Hy@DisableOption{colorlinks}%
3419 \Hy@DisableOption{frenchlinks}%
3420 \ifHy@texht
3421 \long\def\@firstoffive#1#2#3#4#5{#1}%
3422 \long\def\@secondoffive#1#2#3#4#5{#2}%
3423 \long\def\@thirdoffive#1#2#3#4#5{#3}%
3424 \long\def\@fourthoffive#1#2#3#4#5{#4}%
3425 \long\def\@fifthoffive#1#2#3#4#5{#5}%
3426 \providecommand*\@safe@activestruet{}%
3427 \providecommand*\@safe@activesfalse{}%
3428 \def\T@ref#1{%
3429 \Hy@safe@activestruet
3430 \expandafter\@setref\csname r@#1\endcsname\@firstoffive{#1}%
3431 \Hy@safe@activesfalse
3432 }%
3433 \def\T@pageref#1{%
3434 \Hy@safe@activestruet
3435 \expandafter\@setref\csname r@#1\endcsname\@secondoffive{#1}%
3436 \Hy@safe@activesfalse
3437 }%
3438 \else
3439 \ifHy@typexml
3440 \else
3441 \Hy@CatcodeWrapper{%
3442 \RequirePackage{nameref}%
3443 }%
3444 \fi
3445 \fi

```



```

3446 \DeclareRobustCommand\ref{\@ifstar\@refstar\T@ref}%
3447 \DeclareRobustCommand\pageref{%
3448   \@ifstar\@pagerefstar\T@pageref
3449 }%
3450 }
3451 \AfterBeginDocument{%
3452   \ifHy@texht
3453   \else
3454     \Hy@CatcodeWrapper{%
3455       \ReadBookmarks
3456     }%
3457   \fi
3458 }
3459 \ifHy@backref
3460 \RequirePackage{backref}%
3461 \else
3462 \let\Hy@backout\@gobble
3463 \fi
3464 \Hy@DisableOption{backref}
3465 \Hy@DisableOption{pagebackref}
3466 \Hy@activeanchorfalse

```

16 User hypertext macros

We need to normalise all user commands taking a URL argument; Within the argument the following special definitions apply: \#, \%, ~ produce #, %, ~ respectively. for consistency ~ produces ~ as well. At the *top level only* ie not within the argument of another command, you can use # and % unescaped, to produce themselves. even if, say, # is entered as # it will be converted to \# so it does not die if written to an aux file etc. \# will write as # locally while making \specials.

```

3467 \begingroup
3468   \endlinechar=-1 %
3469   \catcode'\^A=14 %
3470   \catcode'\^M\active
3471   \catcode'\%\active
3472   \catcode'\#\active
3473   \catcode'\_\active
3474   \catcode'\$\active
3475   \catcode'\&\active
3476   \gdef\hyper@normalise{^^A
3477     \begingroup
3478       \catcode'\^M\active
3479       \def^^M{ }^^A
3480       \catcode'\%\active
3481       \let%\@percentchar
3482       \let\%\@percentchar
3483       \catcode'\#\active
3484       \def#{\hyper@hash}^^A
3485       \def\#{\hyper@hash}^^A
3486       \@makeother\&^^A
3487       \edef&{\string&}^^A
3488       \edef\&{\string&}^^A
3489       \edef\textunderscore{\string_}^^A
3490       \let_\textunderscore
3491       \catcode'\_\active
3492       \let_\textunderscore

```

```

3493 \let~\hyper@tilde
3494 \let\~\hyper@tilde
3495 \let\textasciitilde\hyper@tilde
3496 \let\\\@backslashchar
3497 \edef$\string$^~A
3498 \Hy@safe@activetrue
3499 \hyper@n@rmalise
3500 }~A
3501 \catcode'\#6 ~A
3502 \gdef\Hy@ActiveCarriageReturn{^~M}~A
3503 \gdef\hyper@n@rmalise#1#2{~A
3504 \def\Hy@tempa{#2}~A
3505 \ifx\Hy@tempa\Hy@ActiveCarriageReturn
3506 \Hy@ReturnAfterElseFi{~A
3507 \hyper@@normalise{#1}~A
3508 }~A
3509 \else
3510 \Hy@ReturnAfterFi{~A
3511 \hyper@@normalise{#1}{#2}~A
3512 }~A
3513 \fi
3514 }~A
3515 \gdef\hyper@@normalise#1#2{~A
3516 \edef\Hy@tempa{~A
3517 \endgroup
3518 \noexpand#1{\Hy@RemovePercentCr#2%^~M\@nil}~A
3519 }~A
3520 \Hy@tempa
3521 }~A
3522 \gdef\Hy@RemovePercentCr#1%^~M#2\@nil{~A
3523 #1~A
3524 \ifx\limits#2\limits
3525 \else
3526 \Hy@ReturnAfterFi{~A
3527 \Hy@RemovePercentCr #2\@nil
3528 }~A
3529 \fi
3530 }~A
3531 \endgroup
3532 \providecommand*\hyper@chars{%
3533 \let\#\hyper@hash
3534 \let\%\@percentchar
3535 \Hy@safe@activetrue
3536 }
3537 \def\hyperlink#1#2{%
3538 \hyper@@link{#1}{#2}%
3539 }
3540 \DeclareRobustCommand*\href{%
3541 \@ifnextchar\bgroup\Hy@href{\hyper@normalise\href@}%
3542 }
3543 \def\Hy@href#1{%
3544 \hyper@normalise\href@
3545 }
3546 \begingroup
3547 \catcode'\$6 %
3548 \catcode'\#12 %
3549 \gdef\href@#1{\expandafter\href@split$1##\}%

```

```

3550 \gdef\href@split$1#$2#$3\\{%
3551   \hyper@link{$1}{$2}%
3552 }%
3553 \endgroup

```

Load package url.sty and save the meaning of the original \url in \nolinkurl.

```

3554 \RequirePackage{url}
3555 \let\HyOrg@url\url
3556 \def\Hurl{\begingroup \Url}
3557 \DeclareRobustCommand*\nolinkurl{\hyper@normalise\nolinkurl@}
3558 \def\nolinkurl@#1{\Hurl{#1}}
3559 \DeclareRobustCommand*\url{\hyper@normalise\url@}
3560 \def\url@#1{\hyper@linkurl{\Hurl{#1}}{#1}}
3561 \DeclareRobustCommand*\hyperimage{\hyper@normalise\hyper@image}
3562 \providecommand\hyper@image[2]{#2}
3563 \def\hypertarget#1#2{%
3564   \ifHy@nesting
3565     \hyper@@anchor{#1}{#2}%
3566   \else
3567     \hyper@@anchor{#1}{\relax}#2%
3568   \fi
3569 }

```

\hyperref is more complicated, as it includes the concept of a category of link, used to make the name. This is not really used in this package. \hyperdef sets up an anchor in the same way. They each have three parameters of category, linkname, and marked text, and \hyperref also has a first parameter of URL. If there is an optional first parameter to \hyperdef, it is the name of a L^AT_EX label which can be used in a short form of \hyperref later, to avoid remembering the name and category.

```

3570 \DeclareRobustCommand*\hyperref{%
3571   \@ifnextchar[{\Hy@babelnormalise\label@hyperref}\@hyperref
3572 }
3573 \def\Hy@babelnormalise#1[#2]{%
3574   \begingroup
3575     \Hy@safe@activetrue
3576     \edef\Hy@tempa{%
3577       \endgroup
3578       \noexpand#1[#{#2}]%
3579     }%
3580   \Hy@tempa
3581 }
3582 \def\@hyperref{\hyper@normalise\@hyperref}
3583 \def\@hyperref#1#2#3{%
3584   \edef\ref@one{\ifx\\#2\\\else#2.\fi#3}%
3585   \expandafter\tryhyper@link\ref@one\{#1}%
3586 }
3587 \def\tryhyper@link#1\\#2{%
3588   \hyper@@link{#2}{#1}%
3589 }
3590 \def\hyperdef{\@ifnextchar[{\label@hyperdef}\@hyperdef]}
3591 \def\@hyperdef#1#2#3{%, category, name, text
3592   \ifHy@nesting
3593     \hyper@@anchor{#1.#2}{#3}%
3594   \else
3595     \hyper@@anchor{#1.#2}{\relax}#3%
3596   \fi
3597 }

```

We also have a need to give a \LaTeX *label* to a hyper reference, to ease the pain of referring to it later.

```

3598 \def\label@hyperref[#1]{%
3599   \expandafter\label@hyperref\csname r@#1\endcsname{#1}%
3600 }%
3601 \def\label@@hyperref#1#2#3{%
3602   \ifx#1\relax
3603     \protect\G@refundefinedtrue
3604     \latex@warning{%
3605       Hyper reference ‘#2’ on page \thepage \space undefined%
3606     }%
3607     \hyper@@link{}{??}{#3}%
3608   \else
3609     \hyper@@link{\expandafter\@fifthoffive#1}%
3610     {\expandafter\@fourthoffive#1\@empty\@empty}{#3}%
3611   \fi
3612 }
3613 \def\label@hyperdef[#1]#2#3#4{% label name, category, name,
3614                               % anchor text
3615   \@bsphack
3616   \if@filesw
3617     \protected@write\@auxout{%
3618       {\string\newlabel{#1}{#2}{#3}{#4}{#2.#3}}%
3619     \fi
3620   \@esphack
3621   \ifHy@nesting
3622     \hyper@@anchor{#2.#3}{#4}%
3623   \else
3624     \hyper@@anchor{#2.#3}{\relax}#4%
3625   \fi
3626 }

```

17 Underlying basic hypertext macros

Links have an optional type, a filename (possibly a URL), an internal name, and some marked text. (Caution: the internal name may contain babel shorthand characters.) If the second parameter is empty, its an internal link, otherwise we need to open another file or a URL. A link start has a type, and a URL.

```

3627 \def\hyper@@link{\let\Hy@reserved@a\relax
3628   \ifnextchar[{\hyper@link@}{\hyper@link@[link]}}%
3629 }
3630 \def\hyper@link@[#1]#2#3#4{%
3631   \begingroup
3632     \protected@edef\Hy@tempa{#2}%
3633     \Hy@safe@activestrue
3634     \edef\x{#3}%
3635     \ifx\Hy@tempa\@empty
3636       \toks0{\hyper@link{#1}}%
3637     \else
3638       \toks0{\expandafter\hyper@readexternallink#2\{#1}}%
3639     \fi
3640     \toks2{%
3641       \Hy@safe@activesfalse
3642       #4%
3643     }%
3644     \edef\Hy@tempa{\the\toks2}%

```

```

3645 \edef\x{\endgroup
3646 \ifx\Hy@tempa\@empty
3647 \noexpand\Hy@Warning{Suppressing empty link}%
3648 \else
3649 \the\toks0 {\x}{\the\toks2}%
3650 \fi
3651 }%
3652 \x
3653 }

```

The problem here is that the first (URL) parameter may be a local file: reference (in which case some browsers treat it differently) or a genuine URL, in which case we'll have to activate a real Web browser. Note that a simple name is also a URL, as that is interpreted as a relative file name. We have to worry about # signs in a local file as well.

```

3654 \def\hyper@readexternallink#1\#2#3#4{%

```

Parameters are:

1. The URL or file name
2. The type
3. The internal name
4. The link string

We need to get the 1st parameter properly expanded, so we delimit the arguments rather than passing it inside a group.

```

3655 \expandafter\@hyper@readexternallink{#2}{#3}{#4}#1::\{#1}%
3656 }

```

Now (potentially), we are passed: 1) The link type 2) The internal name, 3) the link string, 4) the URL type (http, mailto, file etc), 5) the URL details 6) anything after a real : in the URL 7) the whole URL again

```

3657 \def\@pdftempwordfile{file}%
3658 \def\@pdftempwordrun{run}%
3659 \def\@hyper@readexternallink#1#2#3#4:#5:#6\#7{%

```

If there are no colons at all (#6 is blank), its a local file; if the URL type (#4) is blank, its probably a Mac filename, so treat it like a file: URL. The only flaw is if its a relative Mac path, with several colon-separated elements — then we lose. Such names must be prefixed with an explicit dvi:

```

3660 \ifx\#6\%
3661 \expandafter\@hyper@linkfile file:#7\{#3}{#2}%
3662 \else
3663 \ifx\#4\%
3664 \expandafter\@hyper@linkfile file:#7\{#3}{#2}%
3665 \else

```

If the URL type is 'file', pass it for local opening

```

3666 \def\@pdftempa{#4}%
3667 \ifx\@pdftempa\@pdftempwordfile
3668 \expandafter\@hyper@linkfile#7\{#3}{#2}%
3669 \else

```

if it starts 'run:', its to launch an application.

```

3670 \ifx\@pdftempa\@pdftempwordrun
3671 \ifHy@pdfa
3672 \PackageError{hyperref}{%
3673 PDF/A: Launch action is prohibited%

```

```

3674         }\@ehc
3675         \begingroup
3676         \leavevmode
3677         #2%
3678         \endgroup
3679         \else
3680         \expandafter\@hyper@launch#7\{\#{3}\#{2}%
3681         \fi
3682         \else

```

otherwise its a URL

```

3683         \hyper@linkurl{\#{3}\#{7}\ifx\\#2\\\else\hyper@hash#2\fi}%
3684         \fi
3685         \fi
3686         \fi
3687         \fi
3688     }

```

By default, turn run: into file:

```

3689 \def\@hyper@launch run:#1\\#2#3{% filename, anchor text, linkname
3690   \hyper@linkurl{\#{2}}{%
3691     \Hy@linkfileprefix
3692     #1%
3693     \ifx\\#3\\%
3694     \else
3695       \hyper@hash
3696       #3%
3697     \fi
3698   }%
3699 }

```

D P Story ;story@uakron.edu; pointed out that relative paths starting .. fell over. Switched to using \filename@parse to solve this.

```

3700 \def\@hyper@linkfile file:#1\\#2#3{%
3701   %file url,link string, name
3702   \filename@parse{#1}%
3703   \ifx\filename@ext\relax
3704     \edef\filename@ext{\XR@ext}%
3705   \fi
3706   \def\use@file{\filename@area\filename@base.\filename@ext}%
3707   \ifx\filename@ext\XR@ext
3708     \hyper@linkfile{\#{2}}{\use@file}{\#{3}}%
3709   \else
3710     \ifx\@baseurl\@empty
3711       \hyper@linkurl{\#{2}}{%
3712         \Hy@linkfileprefix\use@file\ifx\\#3\\\else\hyper@hash#3\fi
3713       }%
3714     \else
3715       \hyper@linkurl{\#{2}}{\use@file\ifx\\#3\\\else\hyper@hash#3\fi}%
3716     \fi
3717   \fi
3718 }

```

Anchors have a name, and marked text. We have to be careful with the marked text, as if we break off part of something to put a \special around it, all hell breaks loose. Therefore, we check the category code of the first token, and only proceed if its safe. Tanmoy sorted this out.

A curious case arises if the original parameter was in braces. That means that #2 comes here a multiple letters, and the noexpand just looks at the first one, putting the rest

in the output. Yuck.

```

3719 \long\def\hyper@@anchor#1#2{\@hyper@@anchor#1\relax#2\relax}
3720 \long\def\@hyper@@anchor#1\relax#2#3\relax{%
3721   \ifx\#1\%
3722     #2\Hy@WarningNoLine{empty link? #1: #2#3}%
3723   \else
3724     \def\anchor@spot{#2#3}%
3725     \let\put@me@back\@empty
3726     \ifx\relax#2\relax
3727     \else
3728       \ifHy@nesting
3729       \else
3730         \ifcat a\noexpand#2\relax
3731         \else
3732           \ifcat 0\noexpand#2 \relax
3733           \else
3734             \typeout{Anchor start is not alphanumeric %
3735             on input line\the\inputlineno%
3736             }%
3737             \let\anchor@spot\@empty
3738             \def\put@me@back{#2#3}%
3739           \fi
3740         \fi
3741       \fi
3742     \fi
3743     \ifHy@activeanchor
3744       \anchor@spot
3745     \else
3746       \hyper@anchor{#1}%
3747     \fi
3748     \expandafter\put@me@back
3749   \fi
3750   \let\anchor@spot\@empty
3751 }

```

18 Compatibility with the *L^AT_EX2html* package

Map our macro names on to Nikos', so that documents prepared for that system will work without change.

Note, however, that the whole complicated structure for segmenting documents is not supported; it is assumed that the user will load `html.sty` first, and then `hyperref.sty`, so that the definitions in `html.sty` take effect, and are then overridden in a few circumstances by this package.

```

3752 \let\htmladding\hyperimage
3753 \def\htmladdnormallink#1#2{\href{#2}{#1}}
3754 \def\htmladdnormallinkfoot#1#2{\href{#2}{#1}\footnote{#2}}
3755 \def\htmlref#1#2{% anchor text, label
3756   \label@hyperref[{#2}]{#1}%
3757 }

```

This is really too much. The *L^AT_EX2html* package defines its own `\hyperref` command, with a different syntax. Was this always here? Its weird, anyway. We interpret it in the 'printed' way, since we are about fidelity to the page.

```

3758 \def\@latextohtmlX{%
3759   \let\hhyperref\hyperref

```

```

3760 \def\hyperref##1##2##3##4{% anchor text for HTML
3761             % text to print before label in print
3762             % label
3763             % post-label text in print
3764     ##2\ref{##4}##3%
3765 }%
3766 }

```

19 Forms creation

Allow for creation of PDF or HTML forms. The effects here are limited somewhat by the need to support both output formats, so it may not be as clever as something which only wants to make PDF forms.

I (Sebastian) could not have started this without the encouragement of T V Raman.

19.1 Field flags

The field flags are organized in a bit set.

```

3767 \RequirePackage{bitset}

```

Each flag has an option name, an `\if` switch, and a bit position. The default is always ‘false’, the flag is clear. This is also the default of the switch created by `\newif`.

The names of the flags in the PDF specification (1.7) are used as lowercase option names.

```

\HyField@NewFlag #1: type: F annot flags, Ff field flags
#2: PDF name
#3: PDF position
3768 \def\HyField@NewFlag#1#2{%
3769     \lowercase{\HyField@NewOption{#2}}%
3770     \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
3771 }

```

```

\HyField@NewFlagOnly
3772 \def\HyField@NewFlagOnly#1#2{%
3773     \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
3774 }

```

```

\HyField@NewOption #1: option name
3775 \def\HyField@NewOption#1{%
3776     \expandafter\newif\csname ifFld@#1\endcsname
3777     \define@key{Field}{#1}[true]{%
3778         \lowercase{\Field@boolkey{##1}}{#1}%
3779     }%
3780 }

```

```

\HyField@NewBitsetFlag Package ‘bitset’ uses zero based positions, the PDF specification starts with one.
#1: option
#2: PDF name
#3: type: F annot flags, Ff field flags
#4: PDF position
3781 \def\HyField@NewBitsetFlag#1#2#3#4{%
3782     \begingroup
3783         \count@=#4\relax
3784         \advance\count@\m@ne

```



```

3785 \def\x##1{%
3786 \endgroup
3787 \expandafter\def\csname HyField@#3@#1\endcsname{##1}%
3788 \expandafter\ifx\csname HyField@#3@#1\endcsname\relax
3789 \expandafter\edef\csname HyField@#3@#1\endcsname{%
3790 (\number#4) #2%
3791 }%
3792 \else
3793 \expandafter\edef\csname HyField@#3@#1\endcsname{%
3794 \csname HyField@#3@#1\endcsname
3795 /#2%
3796 }%
3797 \fi
3798 }%
3799 \expandafter\x\expandafter{\the\count@}%
3800 }

```

\HyField@UseFlag The bit set is HyField@#1

```

3801 \def\HyField@UseFlag#1#2{%
3802 \lowercase{\HyField@@UseFlag{#2}}{#1}%
3803 }

```

\HyField@@UseFlag

```

3804 \def\HyField@@UseFlag#1#2{%
3805 \bitsetSetValue{HyField@#2}{%
3806 \csname HyField@#2@#1\endcsname
3807 }{%
3808 \csname ifFld@#1\endcsname 1\else 0\fi
3809 }%
3810 }

```

\HyField@SetFlag The bit set is HyField@#1

```

3811 \def\HyField@SetFlag#1#2{%
3812 \lowercase{\HyField@@SetFlag{#2}}{#1}%
3813 }

```

\HyField@@SetFlag

```

3814 \def\HyField@@SetFlag#1#2{%
3815 \bitsetSetValue{HyField@#2}{%
3816 \csname HyField@#2@#1\endcsname
3817 }{1}%
3818 }

```

\HyField@PrintFlags

```

3819 \def\HyField@PrintFlags#1#2{%
3820 \ifHy@verbose
3821 \begingroup
3822 \let\Hy@temp\@empty
3823 \let\MessageBreak\relax
3824 \expandafter\@for\expandafter\x\expandafter:\expandafter=%
3825 \bitsetGetSetBitList{HyField@#1}\do{%
3826 \edef\Hy@temp{%
3827 \Hy@temp
3828 \csname HyField@#1@\x\endcsname\MessageBreak
3829 }%
3830 }%

```

```

3831 \edef\x{\endgroup
3832 \noexpand\Hy@Info{%
3833   Field flags: %
3834   \expandafter\ifx\@car#1\@nil S\else/\fi
3835   #1 %
3836   \bitsetGetDec{HyField@#1} %
3837   (0x\bitsetGetHex{HyField@#1}{32})\MessageBreak
3838   \Hy@temp
3839   for #2%
3840 }%
3841 }\x
3842 \fi
3843 }

```

19.1.1 Declarations of field flags

“Table 8.70 Field flags common to all field types”

```

3844 \HyField@NewFlag{Ff}{ReadOnly}{1}
3845 \HyField@NewFlag{Ff}{Required}{2}
3846 \HyField@NewFlag{Ff}{NoExport}{3}

```

“Table 8.75 Field flags specific to button fields”

```

3847 \HyField@NewFlag{Ff}{NoToggleToOff}{15}
3848 \HyField@NewFlag{Ff}{Radio}{16}
3849 \HyField@NewFlag{Ff}{Pushbutton}{17}
3850 \HyField@NewFlag{Ff}{RadiosInUnison}{26}

```

“Table 8.77 Field flags specific to text fields”

```

3851 \HyField@NewFlag{Ff}{Multiline}{13}
3852 \HyField@NewFlag{Ff}{Password}{14}
3853 \HyField@NewFlag{Ff}{FileSelect}{21}% PDF 1.4
3854 \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
3855 \HyField@NewFlag{Ff}{DoNotScroll}{24}% PDF 1.4
3856 \HyField@NewFlag{Ff}{Comb}{25}% PDF 1.4
3857 \HyField@NewFlag{Ff}{RichText}{26}% PDF 1.5

```

“Table 8.79 field flags specific to choice fields”

```

3858 \HyField@NewFlag{Ff}{Combo}{18}
3859 \HyField@NewFlag{Ff}{Edit}{19}
3860 \HyField@NewFlag{Ff}{Sort}{20}
3861 \HyField@NewFlag{Ff}{MultiSelect}{22}% PDF 1.4
3862 % \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
3863 \HyField@NewFlag{Ff}{CommitOnSelChange}{27}% PDF 1.5

```

Signature fields are not supported.

Until 6.76i hyperref uses field option ‘combo’ to set three flags ‘Combo’, ‘Edit’, and ‘Sort’. Option ‘popdown’ sets flag ‘Combo’ only.

```

3864 \newif\ifFld@popdown
3865 \define@key{Field}{popdown}[true]{%
3866   \lowercase{\Field@boolkey{#1}}{popdown}%
3867 }

```

Annotation flags. The form objects are widget annotations. There are two flags for readonly settings, the one in the annotation flags is ignored, instead the other in the field flags is used.

Flag Print is not much useful, because hyperref do not use the appearance entry of the annotations for most fields.

```

3868 \HyField@NewFlag{F}{Invisible}{1}

```

```

3869 \HyField@NewFlag{F}{Hidden}{2}% PDF 1.2
3870 \HyField@NewFlag{F}{Print}{3}% PDF 1.2
3871 \HyField@NewFlag{F}{NoZoom}{4}% PDF 1.2
3872 \HyField@NewFlag{F}{NoRotate}{5}% PDF 1.3
3873 \HyField@NewFlag{F}{NoView}{6}% PDF 1.3
3874 \HyField@NewFlag{F}{Locked}{8}% PDF 1.4
3875 \HyField@NewFlag{F}{ToggleNoView}{9}% PDF 1.5
3876 \HyField@NewFlag{F}{LockedContents}{10}% PDF 1.7
3877 \ifHy@pdfa
3878   \def\HyField@PDFAFflagWarning#1#2{%
3879     \Hy@Warning{%
3880       PDF/A: Annotation flag ‘#1’ must\MessageBreak
3881       be set to ‘#2’%
3882     }%
3883   }%
3884   \Fld@invisiblefalse
3885   \def\Fld@invisibletrue{%
3886     \HyField@PDFAFflagWarning{invisible}{false}%
3887   }%
3888   \Fld@hiddenfalse
3889   \def\Fld@hiddentrue{%
3890     \HyField@PDFAFflagWarning{hidden}{false}%
3891   }%
3892   \Fld@printtrue
3893   \def\Fld@printfalse{%
3894     \HyField@PDFAFflagWarning{print}{true}%
3895   }%
3896   \Fld@nozoomtrue
3897   \def\Fld@nozoomfalse{%
3898     \HyField@PDFAFflagWarning{nozoom}{true}%
3899   }%
3900   \Fld@norotatetrue
3901   \def\Fld@norotatefalse{%
3902     \HyField@PDFAFflagWarning{norotate}{true}%
3903   }%
3904   \Fld@noviewfalse
3905   \def\Fld@noviewtrue{%
3906     \HyField@PDFAFflagWarning{noview}{false}%
3907   }%
3908 \fi

```

Submit flags. Flag 1 Include/Exclude is not supported, use option noexport instead.

```

3909 \HyField@NewFlag{Submit}{IncludeNoValueFields}{2}
3910 \HyField@NewFlagOnly{Submit}{ExportFormat}{3}
3911 \HyField@NewFlag{Submit}{GetMethod}{4}
3912 \HyField@NewFlag{Submit}{SubmitCoordinates}{5}
3913 \HyField@NewFlagOnly{Submit}{XFDF}{6}
3914 \HyField@NewFlag{Submit}{IncludeAppendSaves}{7}
3915 \HyField@NewFlag{Submit}{IncludeAnnotations}{8}
3916 \HyField@NewFlagOnly{Submit}{SubmitPDF}{9}
3917 \HyField@NewFlag{Submit}{CanonicalFormat}{10}
3918 \HyField@NewFlag{Submit}{ExclNonUserAnnots}{11}
3919 \HyField@NewFlag{Submit}{ExclFKey}{12}
3920 \HyField@NewFlag{Submit}{EmbedForm}{14}
3921 \define@key{Field}{export}{%
3922   \lowercase{\def\Hy@temp{#1}}%
3923   \@ifundefined{Fld@export@\Hy@temp}{%

```

```

3924 \@onelevel@sanitize\Hy@temp
3925 \PackageError{hyperref}{%
3926   Unknown export format '\Hy@temp'.\MessageBreak
3927   Known formats are 'FDF', 'HTML', 'XFDF', and 'PDF'%
3928 }{\ehc
3929 }{%
3930 \let\Fld@export\Hy@temp
3931 }%
3932 }
3933 \def\Fld@export{fdf}
3934 \@namedef{Fld@export@fdf}{0}%
3935 \@namedef{Fld@export@html}{1}%
3936 \@namedef{Fld@export@xfdf}{2}%
3937 \@namedef{Fld@export@pdf}{3}%

```

19.1.2 Set submit flags

\HyField@FlagsSubmit

```

3938 \def\HyField@FlagsSubmit{%
3939   \bitsetReset{HyField@Submit}%
3940   \ifcase\@nameuse{Fld@export@Fld@export} %
3941     % FDF
3942     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
3943     \HyField@UseFlag{Submit}{SubmitCoordinates}%
3944     \HyField@UseFlag{Submit}{IncludeAppendSaves}%
3945     \HyField@UseFlag{Submit}{IncludeAnnotations}%
3946     \HyField@UseFlag{Submit}{CanonicalFormat}%
3947     \HyField@UseFlag{Submit}{ExclNonUserAnnots}%
3948     \HyField@UseFlag{Submit}{ExclFKey}%
3949     \HyField@UseFlag{Submit}{EmbedForm}%
3950   \or % HTML
3951     \HyField@SetFlag{Submit}{ExportFormat}%
3952     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
3953     \HyField@UseFlag{Submit}{GetMethod}%
3954     \HyField@UseFlag{Submit}{SubmitCoordinates}%
3955     \HyField@UseFlag{Submit}{CanonicalFormat}%
3956   \or % XFDF
3957     \HyField@SetFlag{Submit}{XFDF}%
3958     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
3959     \HyField@UseFlag{Submit}{SubmitCoordinates}%
3960     \HyField@UseFlag{Submit}{CanonicalFormat}%
3961   \or % PDF
3962     \HyField@SetFlag{Submit}{SubmitPDF}%
3963     \HyField@UseFlag{Submit}{GetMethod}%
3964   \fi
3965   \HyField@PrintFlags{Submit}{submit button field}%
3966   \bitsetIsEmpty{HyField@Submit}{%
3967     \def\Fld@submitflags{%
3968     }{%
3969     \edef\Fld@submitflags{/Flags \bitsetGetDec{HyField@Submit}}%
3970   }%
3971 }

```

19.1.3 Set annot flags in fields

\HyField@FlagsAnnot

```

3972 \def\HyField@FlagsAnnot#1{%
3973   \bitsetReset{HyField@F}%
3974   \HyField@UseFlag{F}{Invisible}%
3975   \HyField@UseFlag{F}{Hidden}%
3976   \HyField@UseFlag{F}{Print}%
3977   \HyField@UseFlag{F}{NoZoom}%
3978   \HyField@UseFlag{F}{NoRotate}%
3979   \HyField@UseFlag{F}{NoView}%
3980   \HyField@UseFlag{F}{Locked}%
3981   \HyField@UseFlag{F}{ToggleNoView}%
3982   \HyField@UseFlag{F}{LockedContents}%
3983   \HyField@PrintFlags{F}{#1}%
3984   \bitsetIsEmpty{HyField@F}{%
3985     \def\Fld@annotflags{%
3986     }{%
3987       \edef\Fld@annotflags{/F \bitsetGetDec{HyField@F}}%
3988     }%
3989 }

```

19.1.4 Pushbutton field

\HyField@FlagsPushButton

```

3990 \def\HyField@FlagsPushButton{%
3991   \HyField@FlagsAnnot{push button field}%
3992   \bitsetReset{HyField@Ff}%
3993   \HyField@UseFlag{Ff}{ReadOnly}%
3994   \HyField@UseFlag{Ff}{Required}%
3995   \HyField@UseFlag{Ff}{NoExport}%
3996   \HyField@SetFlag{Ff}{PushButton}%
3997   \HyField@PrintFlags{Ff}{push button field}%
3998   \bitsetIsEmpty{HyField@Ff}{%
3999     \def\Fld@flags{%
4000     }{%
4001       \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4002     }%
4003 }

```

19.1.5 Check box field

\HyField@FlagsCheckBox

```

4004 \def\HyField@FlagsCheckBox{%
4005   \HyField@FlagsAnnot{check box field}%
4006   \bitsetReset{HyField@Ff}%
4007   \HyField@UseFlag{Ff}{ReadOnly}%
4008   \HyField@UseFlag{Ff}{Required}%
4009   \HyField@UseFlag{Ff}{NoExport}%
4010   \HyField@PrintFlags{Ff}{check box field}%
4011   \bitsetIsEmpty{HyField@Ff}{%
4012     \def\Fld@flags{%
4013     }{%
4014       \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4015     }%
4016 }

```

19.1.6 Radio button field

\HyField@FlagsRadioButton

```

4017 \def\HyField@FlagsRadioButton{%
4018   \HyField@FlagsAnnot{radio button field}%
4019   \bitsetReset{HyField@Ff}%
4020   \HyField@UseFlag{Ff}{ReadOnly}%
4021   \HyField@UseFlag{Ff}{Required}%
4022   \HyField@UseFlag{Ff}{NoExport}%
4023   \HyField@UseFlag{Ff}{NoToggleToOff}%
4024   \HyField@SetFlag{Ff}{Radio}%
4025   \HyField@UseFlag{Ff}{RadiosInUnison}%
4026   \HyField@PrintFlags{Ff}{radio button field}%
4027   \bitsetIsEmpty{HyField@Ff}{%
4028     \def\Fld@flags{%
4029     }{%
4030       \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4031     }%
4032 }
```

19.1.7 Text fields

\HyField@FlagsText

```

4033 \def\HyField@FlagsText{%
4034   \HyField@FlagsAnnot{text field}%
4035   \bitsetReset{HyField@Ff}%
4036   \HyField@UseFlag{Ff}{ReadOnly}%
4037   \HyField@UseFlag{Ff}{Required}%
4038   \HyField@UseFlag{Ff}{NoExport}%
4039   \HyField@UseFlag{Ff}{Multiline}%
4040   \HyField@UseFlag{Ff}{Password}%
4041   \HyField@UseFlag{Ff}{FileSelect}%
4042   \HyField@UseFlag{Ff}{DoNotSpellCheck}%
4043   \HyField@UseFlag{Ff}{DoNotScroll}%
4044   \ifFld@comb
4045     \ifcase0\ifFld@multiline
4046       \else\ifFld@password
4047       \else\ifFld@fileselect
4048       \else 1\fi\fi\fi\relax
4049     \PackageError{hyperref}{%
4050       Field option ‘comb’ cannot be used together with\MessageBreak
4051       ‘multiline’, ‘password’, or ‘fileselect’%
4052     }\@ehc
4053   \else
4054     \HyField@UseFlag{Ff}{Comb}%
4055   \fi
4056 \fi
4057 \HyField@UseFlag{Ff}{RichText}%
4058 \HyField@PrintFlags{Ff}{text field}%
4059 \bitsetIsEmpty{HyField@Ff}{%
4060   \def\Fld@flags{%
4061   }{%
4062     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4063   }%
4064 }
```

19.1.8 Choice fields

\HyField@FlagsChoice

```

4065 \def\HyField@FlagsChoice{%
4066   \HyField@FlagsAnnot{choice field}%
4067   \bitsetReset{HyField@Ff}%
4068   \HyField@UseFlag{Ff}{ReadOnly}%
4069   \HyField@UseFlag{Ff}{Required}%
4070   \HyField@UseFlag{Ff}{NoExport}%
4071   \HyField@UseFlag{Ff}{Combo}%
4072   \ifFld@combo
4073     \HyField@UseFlag{Ff}{Edit}%
4074   \fi
4075   \HyField@UseFlag{Ff}{Sort}%
4076   \HyField@UseFlag{Ff}{MultiSelect}%
4077   \ifFld@combo
4078     \ifFld@edit
4079       \HyField@UseFlag{Ff}{DoNotSpellCheck}%
4080     \fi
4081   \fi
4082   \HyField@UseFlag{Ff}{CommitOnSelChange}%
4083   \HyField@PrintFlags{Ff}{choice field}%
4084   \bitsetIsEmpty{HyField@Ff}{%
4085     \def\Fld@flags{%
4086     }{%
4087     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4088     }%
4089 }
```

19.2 Choice field

4090 \RequirePackage{kvsetkeys}[2007/09/29]

\HyField@PDFChoices #1: list of choices in key value syntax, key = exported name, value = displayed text.

Input: \Fld@default, \Fld@value, \ifFld@multiselect

Result: \Fld@choices with entries: /Opt, /DV, /V, /I.

```

4091 \def\HyField@PDFChoices#1{%
4092   \begingroup
4093     \gdef\Fld@choices{%
4094     \def\HyTmp@optlist{%
4095       \let\HyTmp@optitem\relax
4096       \count@=0 %
4097       \kv@parse{#1}{%
4098         \Hy@pdfstringdef\kv@key\kv@key
4099         \ifx\kv@value\relax
4100           \ifnum\Hy@pdfversion<3 % implementation note 122, PDF spec 1.7
4101             \xdef\Fld@choices{\Fld@choices[(\kv@key)(\kv@key)]}%
4102           \else
4103             \xdef\Fld@choices{\Fld@choices(\kv@key)}%
4104           \fi
4105         \else
4106           \Hy@pdfstringdef\kv@value\kv@value
4107           \xdef\Fld@choices{\Fld@choices[(\kv@key)(\kv@value)]}%
4108         \fi
4109       \edef\HyTmp@optlist{%
4110         \HyTmp@optlist
4111         \HyTmp@optitem{\the\count@}{\kv@key}0%
```

```

4112     }%
4113     \advance\count@ by 1 %
4114     \@gobbletwo
4115 }%
4116 \xdef\Fld@choices{/Opt[\Fld@choices]}%
4117 \ifFld@multiselect
4118   \HyField@@PDFChoices{DV}\Fld@default
4119   \HyField@@PDFChoices{V}\Fld@value
4120 \else
4121   \ifx\Fld@default\relax
4122   \else
4123     \pdfstringdef\Hy@gtmp\Fld@default
4124     \xdef\Fld@choices{\Fld@choices/DV(\Hy@gtmp)}%
4125   \fi
4126   \ifx\Fld@value\relax
4127   \else
4128     \pdfstringdef\Hy@gtmp\Fld@value
4129     \xdef\Fld@choices{\Fld@choices/V(\Hy@gtmp)}%
4130   \fi
4131 \fi
4132 \endgroup
4133 }

```

\HyField@@PDFChoices

```

4134 \def\HyField@@PDFChoices#1#2{%
4135   \ifx#2\relax
4136   \else
4137     \count@=0 %
4138     \def\HyTmp@optitem##1##2##3{%
4139       \def\HyTmp@key{##2}%
4140       \ifx\HyTmp@key\Hy@gtmp
4141         \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
4142           \HyTmp@optlist
4143           \HyTmp@optitem{##1}{##2}1%
4144         }%
4145         \let\HyTmp@found=Y%
4146       \else
4147         \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
4148           \HyTmp@optlist
4149           \HyTmp@optitem{##1}{##2}##3%
4150         }%
4151       \fi
4152     }%
4153     \expandafter\comma@parse\expandafter{#2}{%
4154       \pdfstringdef\Hy@gtmp\comma@entry
4155       \let\HyTmp@found=N %
4156       \expandafter\let\expandafter\HyTmp@optlist\expandafter\@empty
4157       \HyTmp@optlist
4158       \ifx\HyTmp@found Y%
4159         \advance\count@ by 1 %
4160       \else
4161         \@onelevel@sanitize\comma@entry
4162         \PackageWarning{hyperref}{%
4163           \string\ChoiceBox: Ignoring value ‘\comma@entry’,%
4164           \MessageBreak
4165           it cannot be found in the choices%
4166         }%

```



```

4167     \fi
4168     \@gobble
4169 }%
4170 \def\HyTmp@optitem##1##2##3{%
4171     \ifnum##3=1 %
4172         (##2)%
4173     \fi
4174 }%
4175 \ifcase\count@
4176 \or
4177     \xdef\Fld@choices{\Fld@choices/#1\HyTmp@optlist}%
4178 \else
4179     \xdef\Fld@choices{\Fld@choices/#1[\HyTmp@optlist]]}%
4180     \ifx#1V%
4181         \def\HyTmp@optitem##1##2##3{%
4182             \ifnum##3=1 %
4183                 \@firstofone{ ##1}%
4184             \fi
4185         }%
4186         \edef\HyTmp@optlist{\HyTmp@optlist}%
4187         \xdef\Fld@choices{%
4188             \Fld@choices
4189             /I[\expandafter\@firstofone\HyTmp@optlist]]%
4190         }%
4191     \fi
4192 \fi
4193 \fi
4194 }

```

19.3 Forms

\HyField@SetKeys

```

4195 \def\HyField@SetKeys{%
4196     \setkeys{Field}%
4197 }

4198 \newif\ifFld@checked
4199 \newif\ifFld@disabled
4200 \Fld@checkedfalse
4201 \Fld@disabledfalse
4202 \newcount\Fld@menulength
4203 \newdimen\Fld@Width
4204 \newdimen\Fld@charsize
4205 \Fld@charsize=10\p@
4206 \def\Fld@maxlen{0}
4207 \def\Fld@align{0}
4208 \def\Fld@color{0 0 0 rg}
4209 \def\Fld@bcolor{1 1 1}
4210 \def\Fld@bordercolor{1 0 0}
4211 \def\Fld@bordersep{1\p@}
4212 \def\Fld@borderwidth{1}
4213 \def\Fld@borderstyle{S}
4214 \def\Fld@cbsymbol{4}
4215 \def\Fld@rotation{0}
4216 \def\Form{\@ifnextchar [{\@Form}{\@Form[]}}
4217 \def\endForm{\@endForm}
4218 \newif\ifForm@html

```

```

4219 \Form@htmlfalse
4220 \def\Form@boolkey#1#2{%
4221   \csname Form@#2\ifx\relax#1\relax true\else#1\fi\endcsname
4222 }
4223 \define@key{Form}{action}{%
4224   \hyper@normalise\Hy@DefFormAction{#1}%
4225 }
4226 \def\Hy@DefFormAction{\def\Form@action}
4227 \def\enc@html{html}
4228 \define@key{Form}{encoding}{%
4229   \def\Hy@tempa{#1}%
4230   \ifx\Hy@tempa\enc@html
4231     \Form@htmltrue
4232     \def\Fld@export{html}%
4233   \else
4234     \typeout{hyperref: form 'encoding' key set to #1 %
4235       -- unknown type%
4236     }%
4237     \Form@htmlfalse
4238   \fi
4239 }
4240 \define@key{Form}{method}{%
4241   \lowercase{\def\Hy@temp{#1}}%
4242   \@ifundefined{Form@method@\Hy@temp}{%
4243     \@onelevel@sanitize\Hy@temp
4244     \PackageError{hyperref}{%
4245       Unknown method '\Hy@temp'.\MessageBreak
4246       Known values are 'post' and 'get'%
4247     }\@ehc
4248   }{%
4249     \let\Form@method\Hy@temp
4250     \ifcase\@nameuse{Form@method@\Hy@temp} %
4251       \Fld@getmethodfalse
4252     \else
4253       \Fld@getmethodtrue
4254     \fi
4255   }%
4256 }
4257 \def\Form@method{}
4258 \@namedef{Form@method@post}{0}
4259 \@namedef{Form@method@get}{1}
4260 \def\Field@boolkey#1#2{%
4261   \csname Fld@#2\ifx\relax#1\relax true\else#1\fi\endcsname
4262 }
4263 \newtoks\Field@toks
4264 \Field@toks={ }%
4265 \def\Field@addtoks#1#2{%
4266   \edef\@processme{\Field@toks{\the\Field@toks\space #1="#2"}}%
4267   \@processme
4268 }
4269 \def\Fld@checkequals#1=#2=#3\{\%
4270   \def\@currDisplay{#1}%
4271   \ifx\@#2\%
4272     \def\@currValue{#1}%
4273   \else
4274     \def\@currValue{#2}%
4275   \fi

```

```

4276 }
4277 \define@key{Field}{loc}{%
4278   \def\Fld@loc{#1}%
4279 }
4280 \define@key{Field}{checked}[true]{%
4281   \lowercase{\Field@boolkey{#1}}{checked}%
4282 }
4283 \define@key{Field}{disabled}[true]{%
4284   \lowercase{\Field@boolkey{#1}}{disabled}%
4285 }
4286 \define@key{Field}{accesskey}{%
4287   \Field@addtoks{accesskey}{#1}%
4288 }
4289 \define@key{Field}{tabkey}{%
4290   \Field@addtoks{tabkey}{#1}%
4291 }
4292 \define@key{Field}{name}{%
4293   \def\Fld@name{#1}%
4294 }
4295 \define@key{Field}{width}{%
4296   \def\Fld@width{#1}%
4297   \Field@Width#1\setbox0=\hbox{m}%
4298 }
4299 \define@key{Field}{maxlen}{%
4300   \def\Fld@maxlen{#1}%
4301 }
4302 \define@key{Field}{menulength}{%
4303   \Fld@menulength=#1\relax
4304 }
4305 \define@key{Field}{height}{%
4306   \def\Fld@height{#1}%
4307 }
4308 \define@key{Field}{charsize}{%
4309   \Fld@charsize#1%
4310 }
4311 \define@key{Field}{borderwidth}{%
4312   \def\Fld@borderwidth{#1}%
4313 }
4314 \define@key{Field}{borderstyle}{%
4315   \def\Fld@borderstyle{#1}%
4316 }
4317 \define@key{Field}{bordersep}{%
4318   \def\Fld@bordersep{#1}%
4319 }
4320 \define@key{Field}{default}{%
4321   \def\Fld@default{#1}%
4322 }
4323 \define@key{Field}{align}{%
4324   \def\Fld@align{#1}%
4325 }
4326 \define@key{Field}{value}{%
4327   \def\Fld@value{#1}%
4328 }
4329 \define@key{Field}{checkboxsymbol}{%
4330   \def\Fld@cbsymbol{#1}%
4331 }
4332 \define@key{Field}{rotation}{%

```

```

4333 \def\Fld@rotation{#1}%
4334 }

4335 \define@key{Field}{backgroundcolor}{%
4336   \HyColor@FieldBColor{#1}\Fld@bcolor{hyperref}{backgroundcolor}%
4337 }
4338 \define@key{Field}{bordercolor}{%
4339   \HyColor@FieldBColor{#1}\Fld@bordercolor{hyperref}{bordercolor}%
4340 }
4341 \define@key{Field}{color}{%
4342   \HyColor@FieldColor{#1}\Fld@color{hyperref}{color}%
4343 }

4344 \def\Fld@format@code{}
4345 \def\Fld@validate@code{}
4346 \def\Fld@calculate@code{}
4347 \def\Fld@keystroke@code{}
4348 \def\Fld@onfocus@code{}
4349 \def\Fld@onblur@code{}
4350 \def\Fld@onmousedown@code{}
4351 \def\Fld@onmouseup@code{}
4352 \def\Fld@onenter@code{}
4353 \def\Fld@onexit@code{}
4354 \def\Hy@temp#1{%
4355   \expandafter\Hy@@temp\csname Fld@#1@code\endcsname{#1}%
4356 }
4357 \def\Hy@@temp#1#2{%
4358   \ifHy@pdfa
4359     \define@key{Field}{#2}{%
4360       \PackageError{hyperref}{%
4361         PDF/A: Additional action ‘#2’ is prohibited%
4362       }\@ehc
4363     }%
4364   \else
4365     \define@key{Field}{#2}{%
4366       \def#1{##1}%
4367     }%
4368   \fi
4369 }

4370 \Hy@temp{keystroke}
4371 \Hy@temp{format}
4372 \Hy@temp{validate}
4373 \Hy@temp{calculate}
4374 \Hy@temp{onfocus}
4375 \Hy@temp{onblur}
4376 \Hy@temp{onenter}
4377 \Hy@temp{onexit}
4378 \def\Hy@temp#1{%
4379   \define@key{Field}{#1}{%
4380     \Field@addtoks{#1}{##1}%
4381   }%
4382 }

4383 \Hy@temp{onselect}
4384 \Hy@temp{onchange}
4385 \Hy@temp{ondblclick}
4386 \Hy@temp{onmousedown}
4387 \Hy@temp{onmouseup}
4388 \Hy@temp{onmouseover}
4389 \Hy@temp{onmousemove}

```

```

4390 \Hy@temp{onmouseout}
4391 \Hy@temp{onkeypress}
4392 \Hy@temp{onkeydown}
4393 \Hy@temp{onkeyup}
4394 \ifHy@pdfa
4395   \define@key{Field}{onclick}{%
4396     \PackageError{hyperref}{%
4397       PDF/A: Action 'onclick' is prohibited%
4398     }\@ehc
4399   }%
4400 \else
4401   \define@key{Field}{onclick}{%
4402     \def\Fld@onclick{#1}%
4403     \Field@addtoks{onclick}{#1}%
4404   }%
4405 \fi

4406 \DeclareRobustCommand\TextField{%
4407   \@ifnextchar[{\@TextField}{\@TextField[]}%
4408 }
4409 \DeclareRobustCommand\ChoiceMenu{%
4410   \@ifnextchar[{\@ChoiceMenu}{\@ChoiceMenu[]}%
4411 }
4412 \DeclareRobustCommand\CheckBox{%
4413   \@ifnextchar[{\@CheckBox}{\@CheckBox[]}%
4414 }
4415 \DeclareRobustCommand\PushButton{%
4416   \@ifnextchar[{\@PushButton}{\@PushButton[]}%
4417 }
4418 \DeclareRobustCommand\Gauge{%
4419   \@ifnextchar[{\@Gauge}{\@Gauge[]}%
4420 }
4421 \DeclareRobustCommand\Submit{%
4422   \@ifnextchar[{\@Submit}{\@Submit[]}%
4423 }
4424 \DeclareRobustCommand\Reset{%
4425   \@ifnextchar[{\@Reset}{\@Reset[]}%
4426 }
4427 \def\LayoutTextField#1#2{% label, field
4428   #1 #2%
4429 }
4430 \def\LayoutChoiceField#1#2{% label, field
4431   #1 #2%
4432 }
4433 \def\LayoutCheckField#1#2{% label, field
4434   #1 #2%
4435 }
4436 \def\LayoutPushButtonField#1{% button
4437   #1%
4438 }
4439 \def\MakeRadioField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
4440 \def\MakeCheckField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
4441 \def\MakeTextField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
4442 \def\MakeChoiceField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
4443 \def\MakeButtonField#1{%
4444   \sbox0{%
4445     \hskip\Fld@borderwidth bp#1\hskip\Fld@borderwidth bp%
4446   }%

```

```

4447 \@tempdima\ht0 %
4448 \advance\@tempdima by \Fld@borderwidth bp %
4449 \advance\@tempdima by \Fld@borderwidth bp %
4450 \ht0\@tempdima
4451 \@tempdima\dp0 %
4452 \advance\@tempdima by \Fld@borderwidth bp %
4453 \advance\@tempdima by \Fld@borderwidth bp %
4454 \dp0\@tempdima
4455 \box0\relax
4456 }
4457 \def\DefaultHeightofSubmit{14pt}
4458 \def\DefaultWidthofSubmit{2cm}
4459 \def\DefaultHeightofReset{14pt}
4460 \def\DefaultWidthofReset{2cm}
4461 \def\DefaultHeightofCheckBox{\baselineskip}
4462 \def\DefaultWidthofCheckBox{\baselineskip}
4463 \def\DefaultHeightofChoiceMenu{\baselineskip}
4464 \def\DefaultWidthofChoiceMenu{\baselineskip}
4465 \def\DefaultHeightofText{\baselineskip}
4466 \def\DefaultHeightofTextMultiline{4\baselineskip}
4467 \def\DefaultWidthofText{3cm}
4468 \def\DefaultOptionsofSubmit{print,name=Submit,noexport}
4469 \def\DefaultOptionsofReset{print,name=Reset,noexport}
4470 \def\DefaultOptionsofPushButton{print}
4471 \def\DefaultOptionsofCheckBox{print}
4472 \def\DefaultOptionsofText{print}

```

Default options for the types of \ChoiceMenu.

```

4473 \def\DefaultOptionsofListBox{print}
4474 \def\DefaultOptionsofComboBox{print,edit,sort}
4475 \def\DefaultOptionsofPopdownBox{print}
4476 \def\DefaultOptionsofRadio{print,notoggletooff}

```

20 Setup

```

4477 \ifHy@figures
4478 \Hy@Info{Hyper figures ON}%
4479 \else
4480 \Hy@Info{Hyper figures OFF}%
4481 \fi
4482 \ifHy@nesting
4483 \Hy@Info{Link nesting ON}%
4484 \else
4485 \Hy@Info{Link nesting OFF}%
4486 \fi
4487 \ifHy@hyperindex
4488 \Hy@Info{Hyper index ON}%
4489 \else
4490 \Hy@Info{Hyper index OFF}%
4491 \fi
4492 \ifHy@backref
4493 \Hy@Info{backreferencing ON}%
4494 \else
4495 \Hy@Info{backreferencing OFF}%
4496 \fi
4497 \ifHy@colorlinks
4498 \Hy@Info{Link coloring ON}%

```

```

4499 \else
4500   \Hy@Info{Link coloring OFF}%
4501 \fi
4502 \ifHy@ocgcolorlinks
4503   \Hy@Info{Link coloring with OCG ON}%
4504 \else
4505   \Hy@Info{Link coloring with OCG OFF}%
4506 \fi
4507 \ifHy@pdfa
4508   \Hy@Info{PDF/A mode ON}%
4509 \else
4510   \Hy@Info{PDF/A mode OFF}%
4511 \fi

```

21 Low-level utility macros

We need unrestricted access to the #, ~ and " characters, so make them nice macros.

```

4512 \edef\hyper@hash{\string#}
4513 \edef\hyper@tilde{\string~}
4514 \edef\hyper@quote{\string"}
4515 \let\@currentHref\@empty
4516 \let\Hy@footnote@currentHref\@empty

```

We give the start of document a special label; this is used in backreferencing-by-section, to allow for cites before any sectioning commands. Set up PDF info.

```

4517 \AfterBeginDocument{%
4518   \Hy@pdfstringtrue
4519   \PDF@SetupDoc
4520   \let\PDF@SetupDoc\@empty
4521   \Hy@DisableOption{pdfpagescrop}%
4522   \Hy@DisableOption{pdfpagemode}%
4523   \Hy@DisableOption{pdfnonfullscreenpagemode}%
4524   \Hy@DisableOption{pdfdirection}%
4525   \Hy@DisableOption{pdfviewarea}%
4526   \Hy@DisableOption{pdfviewclip}%
4527   \Hy@DisableOption{pdfprintarea}%
4528   \Hy@DisableOption{pdfprintclip}%
4529   \Hy@DisableOption{pdfprintscaling}%
4530   \Hy@DisableOption{pdfduplex}%
4531   \Hy@DisableOption{pdfpicktraybypdfsize}%
4532   \Hy@DisableOption{pdfprintpagerange}%
4533   \Hy@DisableOption{pdfnumcopies}%
4534   \Hy@DisableOption{pdfstartview}%
4535   \Hy@DisableOption{pdfstartpage}%
4536   \Hy@DisableOption{pdftoolbar}%
4537   \Hy@DisableOption{pdfmenubar}%
4538   \Hy@DisableOption{pdfwindowui}%
4539   \Hy@DisableOption{pdfwindow}%
4540   \Hy@DisableOption{pdfcenterwindow}%
4541   \Hy@DisableOption{pdfdisplaydoctitle}%
4542   \Hy@DisableOption{pdfpagelayout}%
4543   \Hy@DisableOption{pdflang}%
4544   \Hy@DisableOption{baseurl}%
4545   \ifHy@texht\else\hyper@anchorstart{Doc-Start}\hyper@anchorend\fi
4546   \Hy@pdfstringfalse
4547 }

```

22 Localized nullifying of package

Sometimes we just don't want the wretched package interfering with us. Define an environment we can put in manually, or include in a style file, which stops the hyperref functions doing anything. This is used, for instance, in the Elsevier classes, to stop hyperref playing havoc in the front matter.

```

4548 \def\NoHyper{%
4549   \def\hyper@link@{##1}##2##3##4{##4}%
4550   \def\hyper@@anchor##1{%
4551     \global\let\hyper@livelink\hyper@link
4552     \gdef\hyper@link##1##2##3{##3}%
4553     \def\hyper@anchorstart##1{%
4554       \let\hyper@anchorend\@empty
4555       \def\hyper@linkstart##1##2{%
4556         \let\hyper@linkend\@empty
4557         \def\hyper@linkurl##1##2{##1}%
4558         \def\hyper@linkfile##1##2##3{##1}%
4559         \def\hyper@link@{##1}##2##3{%
4560           \let\Hy@backout\@gobble
4561       }
4562 \def\stop@hyper{%
4563   \def\hyper@link@{##1}##2##3##4{##4}%
4564   \let\Hy@backout\@gobble
4565   \def\hyper@@anchor##1{%
4566     \def\hyper@link##1##2##3{##3}%
4567     \def\hyper@anchorstart##1{%
4568       \let\hyper@anchorend\@empty
4569       \def\hyper@linkstart##1##2{%
4570         \let\hyper@linkend\@empty
4571         \def\hyper@linkurl##1##2{##1}%
4572         \def\hyper@linkfile##1##2##3{##1}%
4573         \def\hyper@link@{##1}##2##3{%
4574       }
4575 \def\endNoHyper{%
4576   \global\let\hyper@link\hyper@livelink
4577 }
4578 \}
```

23 Package nohyperref

This package is introduced by Sebastian Rahtz.

Package nohyperref is a dummy package that defines some low level and some top-level commands. It is done for jadetex, which calls hyperref low-level commands, but it would also be useful with people using normal hyperref, who really do not want the package loaded at all.

Some low-level commands:

```

4579 \*nohyperref
4580 \let\hyper@@anchor\@gobble
4581 \def\hyper@link#1#2#3{#3}%
4582 \let\hyper@anchorstart\@gobble
4583 \let\hyper@anchorend\@empty
4584 \let\hyper@linkstart\@gobbletwo
4585 \let\hyper@linkend\@empty
4586 \def\hyper@linkurl#1#2{#1}%
4587 \def\hyper@linkfile#1#2#3{#1}%

```



```

4588 \def\hyper@link@[#1]#2#3{%
4589 \let\PDF@SetupDoc\@empty
4590 \let\PDF@FinishDoc\@empty
4591 \def\nohyperpage#1{#1}

```

Some top-level commands:

```

4592 \def\Acrobatmenu#1#2{\leavevmode#2}
4593 \let\pdfstringdefDisableCommands\@gobbletwo
4594 \let\texorpdfstring\@firstoftwo
4595 \let\pdfbookmark\@undefined
4596 \newcommand\pdfbookmark[3][]{\{}
4597 \let\phantomsection\@empty
4598 \let\hypersetup\@gobble
4599 \let\hyperbaseurl\@gobble
4600 \let\href\@gobble
4601 \let\hyperdef\@gobbletwo
4602 \let\hyperlink\@gobble
4603 \let\hypertarget\@gobble
4604 \def\hyperref{%
4605   \@ifnextchar[\@gobbleopt{\expandafter\@gobbletwo\@gobble}%
4606 }
4607 \long\def\@gobbleopt[#1]{\{}
4608 \let\hyperpage\@empty
4609 \</nohyperref>

```

24 The Mangling Of Aux and Toc Files

Some extra tests so that the hyperref package may be removed or added to a document without having to remove .aux and .toc files (this section is by David Carlisle) All the code is delayed to `\begin{document}`

```

4610 \*package)
4611 \AfterBeginDocument{%

```

First the code to deal with removing the hyperref package from a document.

Write some stuff into the aux file so if the next run is done without hyperref, then `\contentsline` and `\newlabel` are defined to cope with the extra arguments.

```

4612 \if@filesw
4613   \ifHy@typexml
4614     \immediate\closeout\@mainaux
4615     \immediate\openout\@mainaux\jobname.aux\relax
4616     \immediate\write\@auxout{<relaxxml>\relax}%
4617   \fi
4618   \immediate\write\@auxout{%
4619     \string\ifx\string\hyper@anchor\string\@undefined^^J%
4620     \global\let\string\oldcontentsline\string\contentsline^^J%
4621     \gdef\string\contentsline%
4622       \string#1\string#2\string#3\string#4{%
4623       \string\oldcontentsline%
4624       {\string#1}{\string#2}{\string#3}}^^J%
4625     \global\let\string\oldnewlabel\string\newlabel^^J%
4626     \gdef\string\newlabel\string#1\string#2{%
4627       \string\newlabelxx{\string#1}\string#2}^^J%
4628     \gdef\string\newlabelxx%
4629       \string#1\string#2\string#3\string#4\string#5\string#6{%
4630       \string\oldnewlabel{\string#1}{\string#2}{\string#3}}^^J%

```

But the new aux file will be read again at the end, with the normal definitions expected, so better put things back as they were.

```
4631      \string\AtEndDocument{%
4632      \let\string\contentsline\string\oldcontentsline^^J%
4633      \let\string\newlabel\string\oldnewlabel}^^J%
```

If the document is being run with hyperref put this definition into the aux file, so we can spot it on the next run.

```
4634      \string\else^^J%
4635      \global\let\string\hyper@last\relax^^J%
4636      \string\fi^^J%
4637  }%
4638  \fi
```

Now the code to deal with adding the hyperref package to a document with aux and toc written the standard way.

If hyperref was used last time, do nothing. If it was not used, or an old version of hyperref was used, don't use that TOC at all but generate a warning. Not ideal, but better than failing with pre-5.0 hyperref TOCs.

```
4639  \ifx\hyper@last\@undefined
4640    \def\@starttoc#1{%
4641      \begingroup
4642      \makeatletter
4643      \IfFileExists{\jobname.#1}{%
4644        \Hy@WarningNoLine{%
4645          old #1 file detected, not used; run LaTeX again%
4646        }%
4647      }{%
4648        \if@filesw
4649          \expandafter\newwrite\csname tf@#1\endcsname
4650          \immediate\openout\csname tf@#1\endcsname \jobname.#1\relax
4651        \fi
4652        \@nobreakfalse
4653      \endgroup
4654    }%
4655    \def\newlabel#1#2{\@newl@bel r{#1}{#2}{ }{}{}}}%
4656  \fi
4657 }
```

25 Title strings

If options pdftitle and pdfauthor are not used, these informations for the pdf information dictionary can be extracted by the nd

```
4658 \ifHy@usetitle
4659   \let\HyOrg@title\title
4660   \let\HyOrg@author\author
4661   \def\title{\@ifnextchar[{\Hy@scanopttitle}{\Hy@scantitle}}%
4662   \def\Hy@scanopttitle[#1]{%
4663     \gdef\Hy@title{#1}%
4664     \HyOrg@title[#1]%
4665   }%
4666   \def\Hy@scantitle#1{%
4667     \gdef\Hy@title{#1}%
4668     \HyOrg@title{#1}%
4669   }%
4670   \def\author{\@ifnextchar[{\Hy@scanoptauthor}{\Hy@scanauthor}}%
```

```

4671 \def\Hy@scanoptauthor[#1]{%
4672   \gdef\Hy@author{#1}%
4673   \HyOrg@author[{#1}]%
4674 }%
4675 \def\Hy@scanauthor#1{%
4676   \gdef\Hy@author{#1}%
4677   \HyOrg@author{#1}%
4678 }%

```

The case, that or re given before hyperref is loaded, is much more complicate, because LaTeX initializes the macros title and author with LaTeX error and warning messages.

```

4679 \begingroup
4680   \def\process@me#1\@nil#2{%
4681     \expandafter\let\expandafter\x\csname @#2\endcsname
4682     \edef\y{\expandafter\strip@prefix\meaning\x}%
4683     \def\c##1##2\@nil{%
4684       \ifx\\##1\\%
4685       \else
4686         \expandafter\gdef\csname Hy@#2\expandafter\endcsname
4687           \expandafter{\x}%
4688       \fi
4689     }%
4690     \expandafter\c\y\relax#1\@nil
4691   }%
4692   \expandafter\process@me\string\@latex@\@nil{title}%
4693   \expandafter\process@me\string\@latex@\@nil{author}%
4694 \endgroup
4695 \fi
4696 \Hy@DisableOption{pdfusetitle}

```

Macro \Hy@UseMaketitleInfos is used in the driver files, before the information entries are used.

The newline macro \newline or \\ is much more complicate. In the title a good replacement can be a space, but can be already a space after \\ in the title string. So this space is removed by scanning for the next non-empty argument.

In the macro \author the newline can perhaps separate the different authors, so the newline expands here to a comma with space.

The possible arguments such as space or the optional argument after the newline macros are not detected.

```

4697 \def\Hy@UseMaketitleString#1{%
4698   \@ifundefined{Hy@#1}{}{%
4699     \begingroup
4700       \let\Hy@saved@hook\pdfstringdefPreHook
4701       \pdfstringdefDisableCommands{%
4702         \expandafter\let\expandafter\\\csname Hy@newline@#1\endcsname
4703         \let\newline\\%
4704       }%
4705       \expandafter\ifx\csname @pdf#1\endcsname\@empty
4706         \expandafter\pdfstringdef\csname @pdf#1\endcsname{%
4707           \csname Hy@#1\endcsname\@empty
4708         }%
4709       \fi
4710       \global\let\pdfstringdefPreHook\Hy@saved@hook
4711     \endgroup
4712   }%
4713 }
4714 \def\Hy@newline@title#1{ #1}

```

```

4715 \def\Hy@newline@author#1{, #1}
4716 \def\Hy@UseMaketitleInfos{%
4717   \Hy@UseMaketitleString{title}%
4718   \Hy@UseMaketitleString{author}%
4719 }

```

26 Page numbers

This stuff is done by Heiko Oberdiek.

27 Every page

```

4720 \RequirePackage{atbegshi}[2007/09/09]
4721 \def\Hy@EveryPageHook{}
4722 \def\Hy@EveryPageBoxHook{}
4723 \def\Hy@FirstPageHook{}
4724 \AtBeginShipout{%
4725   \Hy@EveryPageHook
4726   \ifx\Hy@EveryPageBoxHook\@empty
4727   \else
4728     \setbox\AtBeginShipoutBox=\vbox{%
4729       \offinterlineskip
4730       \Hy@EveryPageBoxHook
4731       \box\AtBeginShipoutBox
4732     }%
4733   \fi
4734 }
4735 \AtBeginShipoutFirst{%
4736   \Hy@FirstPageHook
4737 }
4738 \g@addto@macro\Hy@FirstPageHook{%
4739   \PDF@FinishDoc
4740   \gdef\PDF@FinishDoc{}}%
4741 }

```

27.1 PDF /PageLabels

Internal macros of this module are marked with \HyPL@.

```

4742 \ifHy@pagelabels
4743   \begingroup\expandafter\expandafter\expandafter\endgroup
4744   \expandafter\ifx\csname thepage\endcsname\relax
4745     \Hy@pagelabelsfalse
4746     \Hy@WarningNoLine{%
4747       Option 'pdfpagelabels' is turned off\MessageBreak
4748       because \string\thepage\space is undefined%
4749     }%
4750     \csname fi\endcsname
4751     \csname iffalse\expandafter\endcsname
4752   \fi

```

\thispdfpagelabel The command \thispdfpagelabel allows to label a special page without the redefinition of \thepage for the page.

```

4753 \def\thispdfpagelabel#1{%
4754   \gdef\HyPL@thisLabel{#1}%
4755 }%
4756 \global\let\HyPL@thisLabel\relax

```

`\HyPL@Labels` The page labels are collected in `\HyPL@Labels` and set at the end of the document.

```
4757 \def\HyPL@Labels{}%
```

`\Hy@abspage` We have to know the the absolute page number and introduce a new counter for that.

```
4758 \newcount\Hy@abspage
```

```
4759 \Hy@abspage=0 %
```

For comparisons with the values of the previous page, some variables are needed:

```
4760 \def\HyPL@LastType{init}%
```

```
4761 \def\HyPL@LastNumber{0}%
```

```
4762 \def\HyPL@LastPrefix{}%
```

Definitions for the PDF names of the L^AT_EX pendants.

```
4763 \def\HyPL@arabic{D}%
```

```
4764 \def\HyPL@Roman{R}%
```

```
4765 \def\HyPL@roman{r}%
```

```
4766 \def\HyPL@Alph{A}%
```

```
4767 \def\HyPL@alph{a}%
```

`\HyPL@EveryPage` If a page is shipout and the page number is known, `\HyPL@EveryPage` has to be called. It stores the current page label.

```
4768 \def\HyPL@EveryPage{%
4769   \begingroup
4770   \ifx\HyPL@thisLabel\relax
4771     \let\HyPL@page\thepage
4772   \else
4773     \let\HyPL@page\HyPL@thisLabel
4774     \global\let\HyPL@thisLabel\relax
4775   \fi
4776   \let\HyPL@Type\relax
4777   \ifnum\the\c@page>0 %
4778     \expandafter\HyPL@CheckThePage\HyPL@page\@nil
4779   \fi
4780   \let\Hy@temp Y%
4781   \ifx\HyPL@Type\HyPL@LastType
4782   \else
4783     \let\Hy@temp N%
4784   \fi
4785   \ifx\HyPL@Type\relax
4786     \pdfstringdef\HyPL@Prefix{\HyPL@page}%
4787   \else
4788     \pdfstringdef\HyPL@Prefix\HyPL@Prefix
4789   \fi
4790   \ifx\HyPL@Prefix\HyPL@LastPrefix
4791   \else
4792     \let\Hy@temp N%
4793   \fi
4794   \if Y\Hy@temp
4795     \advance\c@page by -1 %
4796     \ifnum\HyPL@LastNumber=\the\c@page\relax
4797   \else
4798     \let\Hy@temp N%
4799   \fi
4800   \Hy@StepCount\c@page
4801 \fi
4802 \if N\Hy@temp
4803   \ifx\HyPL@Type\relax
```

```

4804         \HyPL@StorePageLabel{/P(\HyPL@Prefix)}%
4805     \else
4806         \HyPL@StorePageLabel{%
4807             \ifx\HyPL@Prefix\@empty
4808             \else
4809                 /P(\HyPL@Prefix)%
4810             \fi
4811             /S/\csname HyPL\HyPL@Type\endcsname
4812             \ifnum\the\c@page=1 %
4813             \else
4814                 \space/St \the\c@page
4815             \fi
4816         }%
4817     \fi
4818 \fi
4819 \xdef\HyPL@LastNumber{\the\c@page}%
4820 \global\let\HyPL@LastType\HyPL@Type
4821 \global\let\HyPL@LastPrefix\HyPL@Prefix
4822 \endgroup
4823 \Hy@GlobalStepCount\Hy@abspage
4824 }%

```

`\HyPL@CheckThePage` Macro `\HyPL@CheckThePage` calls `\HyPL@@CheckThePage` that does the job.

```

4825 \def\HyPL@CheckThePage#1\@nil{%
4826     \HyPL@@CheckThePage{#1}#1\csname\endcsname\c@page\@nil
4827 }%

```

`\HyPL@@CheckThePage` The first check is, is `\thepage` is defined such as in L^AT_EX, e. g.: `\csname @arabic\endcsname\c@page`. In the current implementation the check fails, if there is another `\csname` before.

The second check tries to detect `\arabic{page}` at the end of the definition text of `\thepage`.

```

4828 \def\HyPL@@CheckThePage#1#2\csname#3\endcsname\c@page#4\@nil{%
4829     \def\Hy@tempa{#4}%
4830     \def\Hy@tempb{\csname\endcsname\c@page}%
4831     \ifx\Hy@tempa\Hy@tempb
4832         \expandafter\ifx\csname HyPL#3\endcsname\relax
4833     \else
4834         \def\HyPL@Type{#3}%
4835         \def\HyPL@Prefix{#2}%
4836     \fi
4837 \else
4838     \begingroup
4839     \let\Hy@next\endgroup
4840     \let\HyPL@found\@undefined
4841     \def\arabic{\HyPL@Format{arabic}}%
4842     \def\Roman{\HyPL@Format{Roman}}%
4843     \def\roman{\HyPL@Format{roman}}%
4844     \def\Alph{\HyPL@Format{Alph}}%
4845     \def\alph{\HyPL@Format{alph}}%
4846     \protected@edef\Hy@temp{#1}%
4847     \ifx\HyPL@found\relax
4848         \toks@{\expandafter{\Hy@temp}}%
4849         \edef\Hy@next{\endgroup
4850             \noexpand\HyPL@@@CheckThePage\the\toks@
4851             \noexpand\HyPL@found\relax\noexpand\@nil
4852         }%
4853     \fi

```

```

4854     \Hy@next
4855     \fi
4856 }%

```

\HyPL@Format The help macro `\HyPL@Format` is executed while a `\protected@edef` in the second check method of `\HyPL@@CheckPage`. The first occurrences of, for example, `\arabic{page}` is marked by `\HyPL@found` that is also defined by `\csname`.

```

4857 \def\HyPL@Format#1#2{%
4858   \ifx\HyPL@found\@undefined
4859     \expandafter\ifx\csname c@#2\endcsname\c@page
4860       \expandafter\noexpand\csname HyPL@found\endcsname{#1}%
4861     \else
4862       \expandafter\noexpand\csname#1\endcsname{#2}%
4863     \fi
4864   \else
4865     \expandafter\noexpand\csname#1\endcsname{#2}%
4866   \fi
4867 }%

```

\HyPL@@@CheckThePage If the second check method is successful, `\HyPL@@@CheckThePage` scans the result of `\HyPL@Format` and stores the found values.

```

4868 \def\HyPL@@@CheckThePage#1\HyPL@found#2#3\@nil{%
4869   \def\Hy@tempa{#3}%
4870   \def\Hy@tempb{\HyPL@found\relax}%
4871   \ifx\Hy@tempa\Hy@tempb
4872     \def\HyPL@Type{#2}%
4873     \def\HyPL@Prefix{#1}%
4874   \fi
4875 }%

```

\HyPL@StorePageLabel Dummy for drivers that does not support `/PageLabel`.

```

4876 \providecommand*\HyPL@StorePageLabel[1]{}%

```

\HyPL@Useless The `/PageLabels` entry does not make sense, if the absolute page numbers and the page labels are the same. Then `\HyPL@Labels` has the meaning of `\HyPL@Useless`.

```

4877 \def\HyPL@Useless{0<</S/D>>}%
4878 \@onelevel@sanitize\HyPL@Useless

```

\HyPL@SetPageLabels The page labels are written to the PDF catalogue. The command `\Hy@PutCatalog` is defined in the driver files.

```

4879 \def\HyPL@SetPageLabels{%
4880   \@onelevel@sanitize\HyPL@Labels
4881   \ifx\HyPL@Labels\@empty
4882     \else
4883       \ifx\HyPL@Labels\HyPL@Useless
4884       \else
4885         \Hy@PutCatalog{/PageLabels<</Nums[\HyPL@Labels]>>}%
4886       \fi
4887     \fi
4888 }%

4889 \g@addto@macro\Hy@EveryPageHook{\HyPL@EveryPage}%
4890 \fi

```

Option ‘pdfpagelabels’ has been used and is now disabled.

```

4891 \Hy@DisableOption{pdfpagelabels}
4892 \</package>

```

27.1.1 pdfTeX and VTeX

Because of pdfTeX's `\pdfcatalog` command the `/PageLabels` entry can set at end of document in the first run.

`\Hy@PutCatalog`

```
4893 <pdfTeX>\let\Hy@PutCatalog\pdfcatalog
```

The code for VTeX is more complicate, because it does not allow the direct access to the `/Catalog` object. The command scans its argument and looks for a `/PageLabels` entry.

VTeX 6.59g is the first version, that implements `\special{!pdfpagelabels...}`. For this version `\VTeXversion` reports 660.

```
4894 <*vTeX>
4895 \providecommand*{\XR@ext}{pdf}
4896 \edef\Hy@VTeXversion{%
4897   \ifx\VTeXversion\@undefined
4898     \z@
4899   \else
4900     \ifx\VTeXversion\relax
4901       \z@
4902     \else
4903       \VTeXversion
4904     \fi
4905   \fi
4906 }
4907 \begingroup
4908   \ifnum\Hy@VTeXversion<660 %
4909     \gdef\Hy@PutCatalog#1{%
4910       \Hy@WarningNoLine{%
4911         VTeX 6.59g or above required for pdfpagelabels%
4912       }%
4913     }%
4914   \else
4915     \gdef\Hy@PutCatalog#1{%
4916       \Hy@vt@PutCatalog#1/PageLabels<<>>\@nil
4917     }%
4918     \gdef\Hy@vt@PutCatalog#1/PageLabels<<#2>>#3\@nil{%
4919       \ifx\#2\%
4920       \else
4921         \immediate\special{!pdfpagelabels #2}%
4922       \fi
4923     }%
4924   \fi
4925 \endgroup
4926 </vTeX>

4927 <*pdfTeX | vTeX>
```

`\HyPL@StorePageLabel` This macro adds the entry #1 to `\HyPL@Labels`.

```
4928 \ifHy@pagelabels
4929   \def\HyPL@StorePageLabel#1{%
4930     \toks@\expandafter{\HyPL@Labels}%
4931     \xdef\HyPL@Labels{%
4932       \the\toks@
4933       \the\Hy@abspage<<#1>>%
4934     }%
4935   }%
```


At the end of the document, \clearpage tries to make sure, that no further pages will follow. Then the PDF catalog entry for \PageLabels is set.

```

4936 \ifclassloaded{revtex4}{%
4937   \g@addto@macro\clear@document{\HyPL@SetPageLabels}%
4938 }{%
4939   \AtEndDocument{\clearpage\HyPL@SetPageLabels}%
4940 }%

4941 \fi
4942 </pdfTeX | vtex>

```

27.1.2 pdfmarkbase, dvipdfm

```

4943 <*pdfmarkbase>
4944 \begingroup
4945 \toks@{\expandafter{\Hy@FirstPageHook}%
4946 \xdef\Hy@FirstPageHook{%
4947   \noexpand\headerps@out{%
4948     systemdict /pdfmark known%
4949     {%
4950       userdict /?pdfmark systemdict /exec get put%
4951     }{%
4952       userdict /?pdfmark systemdict /pop get put %
4953       userdict /pdfmark systemdict /cleartomark get put%
4954     }%
4955     ifelse%
4956   }%
4957   \the\toks@
4958 }%
4959 \endgroup
4960 </pdfmarkbase>

\Hy@PutCatalog
4961 <dvipdfm>\def\Hy@PutCatalog#1{\@pdfm@mark{docview << #1 >>}}
4962 <*pdfmarkbase>
4963 \def\Hy@PutCatalog#1{%
4964   \pdfmark{pdfmark=/PUT,Raw={\string{Catalog\string} << #1 >>}}%
4965 }
4966 </pdfmarkbase>

4967 <*pdfmarkbase | dvipdfm>
4968 \ifHy@pagelabels

```

\HyPL@StorePageLabel This macro writes a string to the .aux file.

```

4969 \def\HyPL@StorePageLabel#1{%
4970   \if@filesw
4971     \begingroup
4972       \edef\Hy@tempa{\the\Hy@abspage<<#1>>}%
4973       \immediate\write\@mainaux{%
4974         \string\HyPL@Entry{\Hy@tempa}%
4975       }%
4976     \endgroup
4977   \fi
4978 }%

```

Write a dummy definition of \HyPL@Entry for the case, that the next run is done without hyperref. A marker for the rerun warning is set and the /PageLabels is written.

```

4979 \AfterBeginDocument{%
4980   \if@filesw
4981     \immediate\write\@mainaux{%
4982       \string\providecommand\string*\string\HyPL@Entry[1]{}%
4983     }%
4984   \fi
4985   \ifx\HyPL@Labels\@empty
4986     \Hy@WarningNoLine{Rerun to get /PageLabels entry}%
4987   \else
4988     \HyPL@SetPageLabels
4989   \fi
4990   \let\HyPL@Entry\@gobble
4991 }%

\HyPL@Entry
4992 \def\HyPL@Entry#1{%
4993   \expandafter\gdef\expandafter\HyPL@Labels\expandafter{%
4994     \HyPL@Labels
4995     #1%
4996   }%
4997 }%

4998 \fi
4999 </pdfmarkbase | dvipdfm>

5000 <*package>

5001 \MaybeStopEarly

```

28 Automated L^AT_EX hypertext cross-references

Anything which can be referenced advances some counter; we overload this to put in a hypertext starting point (with no visible anchor), and make a note of that for later use in `\label`. This will fail badly if `\theH<name>` does not expand to a sensible reference. This means that classes or package which introduce new elements need to define an equivalent `\theH<name>` for every `\the<name>`. We do make a trap to make `\theH<name>` be the same as `\arabic{<name>}`, if `\theH<name>` is not defined, but this is not necessarily a good idea. Alternatively, the ‘naturalnames’ option uses whatever L^AT_EX provides, which may be useable. But then its up to you to make sure these are legal PDF and HTML names. The ‘hypertextnames=false’ option just makes up arbitrary names.

All the shenanigans is to make sure section numbers etc are always arabic, separated by dots. Who knows how people will set up `\@currentlabel`? If they put spaces in, or brackets (quite legal) then the hypertext processors will get upset.

But this is flaky, and open to abuse. Styles like subeqn will mess it up, for starters. Appendices are an issue, too. We just hope to cover most situations. We can at least cope with the standard sectioning structure, allowing for `\part` and `\chapter`.

Start with a fallback for equations

```

5002 \def\Hy@CounterExists#1{%
5003   \begingroup\expandafter\expandafter\expandafter\endgroup
5004   \expandafter\ifx\csname c@#1\endcsname\relax
5005     \expandafter\@gobble
5006   \else
5007     \begingroup\expandafter\expandafter\expandafter\endgroup
5008     \expandafter\ifx\csname the#1\endcsname\relax
5009       \expandafter\expandafter\expandafter\@gobble
5010     \else

```

```

5011 \expandafter\expandafter\expandafter\@firstofone
5012 \fi
5013 \fi
5014 }
5015 \Hy@CounterExists{section}{%
5016 \newcommand\theHequation{\theHsection.\arabic{equation}}%
5017 }
5018 \Hy@CounterExists{part}{%
5019 \newcommand\theHpart{\arabic{part}}%
5020 }
5021 \ifundefined{thechapter}{%
5022 \newcommand\theHsection {\arabic{section}}%
5023 \newcommand\theHfigure {\arabic{figure}}%
5024 \newcommand\theHtable {\arabic{table}}%
5025 }{%
5026 \newcommand\theHchapter {\arabic{chapter}}%
5027 \newcommand\theHfigure {\theHchapter.\arabic{figure}}%
5028 \newcommand\theHtable {\theHchapter.\arabic{table}}%
5029 \newcommand\theHsection {\theHchapter.\arabic{section}}%
5030 }
5031 \newcommand\theHsubsection {\theHsection.\arabic{subsection}}
5032 \newcommand\theHsubsubsection{\theHsubsection.\arabic{subsubsection}}
5033 \newcommand\theHparagraph {\theHsubsubsection.\arabic{paragraph}}
5034 \newcommand\theHsubparagraph {\theHparagraph.\arabic{subparagraph}}
5035 \newcommand\theHtheorem {\theHsection.\arabic{theorem}}
5036 \newcommand\theHthm {\theHsection.\arabic{thm}}

```

Thanks to Greta Meyer (gbd@pop.cwru.edu) for making me realize that enumeration starts at 0 for every list! But `\item` occurs inside `\trivlist`, so check if its a real `\item` before incrementing counters.

```

5037 \let\H@item\item
5038 \newcounter{Item}
5039 \def\theHItem{\arabic{Item}}
5040 \def\item{%
5041 \if@hyper@itemfalse
5042 \if@nmbrlist\@hyper@itemtrue\fi
5043 \H@item
5044 }
5045 \newcommand\theHenumi {\theHItem}
5046 \newcommand\theHenumii {\theHItem}
5047 \newcommand\theHenumiii {\theHItem}
5048 \newcommand\theHenumiv {\theHItem}
5049 \newcommand\theHHfootnote {\arabic{Hfootnote}}
5050 \newcommand\theHmpfootnote{\arabic{mpfootnote}}
5051 \let\theHmpfootnote\theHHfootnote

```

Tanmoy asked for this default handling of undefined `\theH<name>` situations. It really isn't clear what would be ideal, whether to turn off hyperizing of unknown elements, to pick up the textual definition of the counter, or to default it to something like `\arabic{name}`. We take the latter course, slightly worriedly.

```

5052 \let\H@refstepcounter\refstepcounter
5053 \edef\name@of@eq{equation}%
5054 \edef\name@of@slide{slide}%

```

We do not want the handler for `\refstepcounter` to cut in during the processing of `\item` (we handle that separately), so we provide a bypass conditional.

```

5055 \newif\if@hyper@item
5056 \newif\if@skiphyperref

```

```

5057 \@hyper@itemfalse
5058 \@skiphyperreffalse
5059 \def\refstepcounter#1{%
5060   \ifHy@pdfstring
5061   \else
5062     \H@refstepcounter{#1}%
5063     \edef\This@name{#1}%
5064     \ifx\This@name\name@of@slide
5065     \else
5066       \if@skiphyperref
5067       \else
5068         \ifhyper@item
5069         \stepcounter{Item}%
5070         \hyper@refstepcounter{Item}%
5071         \@hyper@itemfalse
5072       \else
5073         \hyper@refstepcounter{#1}%
5074       \fi
5075     \fi
5076   \fi
5077 \fi
5078 }

```

AMS¹TeX processes all equations twice; we want to make sure that the hyper stuff is not executed twice, so we use the AMS `\ifmeasuring@`, initialized if AMS math is not used.

```

5079 \@ifpackageloaded{amsmath}{\newif\ifmeasuring@measuring@false}

```

`\hyper@refstepcounter`

```

5080 \def\hyper@refstepcounter#1{%
5081   \edef\This@name{#1}%
5082   \ifx\This@name\name@of@eq
5083     \@ifundefined{theHequation}{%
5084       \make@stripped@name{\theequation}%
5085       \let\theHequation\newname
5086     }{}%
5087   \fi
5088   \@ifundefined{theH#1}{%
5089     \expandafter\def\csname theH#1\endcsname{\arabic{#1}}%
5090   }{}%
5091   \hyper@makecurrent{#1}%
5092   \ifmeasuring@
5093   \else
5094     \Hy@raisedlink{%
5095       \hyper@anchorstart{\@currentHref}\hyper@anchorend
5096     }%
5097   \fi
5098 }

```

After `\appendix` “chapter” (or “section” for classes without chapter) should be replaced by “appendix” to get `\autoref` work. Macro `\Hy@chapapp` contains the current valid name like `\@chapapp`, which cannot be used, because this string depends on the current language.

The “french” package defines counter `\thechapter` by `\newcounterchapter`, if `\@ifundefinedchapter`.

```

5099 \begingroup\expandafter\expandafter\expandafter\endgroup
5100 \expandafter\ifx\csname chapter\endcsname\relax

```

```

5101 \def\Hy@chapterstring{section}%
5102 \else
5103 \def\Hy@chapterstring{chapter}%
5104 \fi
5105 \def\Hy@appendixstring{appendix}
5106 \def\Hy@chapapp{\Hy@chapterstring}
5107 \let\HyOrg@appendix\appendix
5108 \def\appendix{%
5109 \ifundefined{chapter}%
5110 {\gdef\theHsection{\Alph{section}}}%
5111 {\gdef\theHchapter{\Alph{chapter}}}%
5112 \xdef\Hy@chapapp{\Hy@appendixstring}%
5113 \HyOrg@appendix
5114 }

```

\hyper@makecurrent Because of Babel mucking around, nullify \textlatin when making names. And \@number because of babel's lrbabel.def.

```

5115 \def\hyper@makecurrent#1{%
5116 \begingroup
5117 \edef\Hy@param{#1}%
5118 \ifx\Hy@param\Hy@chapterstring
5119 \let\Hy@param\Hy@chapapp
5120 \fi
5121 \ifHy@hypertextnames
5122 \let\@number\@firstofone
5123 \ifundefined{latin@Alph}{\fi}%
5124 \ifx\@Alph\greek@Alph
5125 \def\@Alph{Alph\@arabic}%
5126 \fi
5127 }%
5128 \ifx\@Alph\@Alph@bul
5129 \def\@Alph{Alph\@arabic}%
5130 \fi
5131 \ifx\@alph\@alph@bul
5132 \def\@alph{alph\@arabic}%
5133 \fi
5134 \ifHy@naturalnames
5135 \let\textlatin\@firstofone
5136 \xdef\@currentHlabel{\csname the#1\endcsname}%
5137 \else
5138 \xdef\@currentHlabel{\csname theH#1\endcsname}%
5139 \fi
5140 \xdef\@currentHref{%
5141 \Hy@param.\expandafter\strip@prefix\meaning\@currentHlabel
5142 }%
5143 \else
5144 \Hy@GlobalStepCount\Hy@linkcounter
5145 \xdef\@currentHref{\Hy@param.the\Hy@linkcounter}%
5146 \fi
5147 \endgroup
5148 }

5149 \ifpackageloaded{fancyvrb}{%
5150 \ifpackagelater{fancyvrb}{1998/05/20}{\fi}%
5151 \def\FV@StepLineNo{%
5152 \FV@SetLineNo
5153 \def\FV@StepLineNo{\H@refstepcounter{FancyVerbLine}}%
5154 \FV@StepLineNo

```

```

5155 }%
5156 }%
5157 }{}

```

29 Package lastpage support

Package lastpage directly writes the `\newlabel` command to the aux file. Because package hyperref requires additional arguments, the internal command `\lastpage@putlabel` is redefined. The patch is deferred by `\AtBeginDocument`, because it is possible that package lastpage is loaded after package hyperref. The same algorithm (options hypertexnames and plainpages) is used to get the page anchor name as in `\Hy@EveryPageAnchor` (see sec. 38). The link will not work if option pageanchor is set to false.

`\lastpage@putlabel`

```

5158 \AtBeginDocument{%
5159   \ifclassloaded{revtex4}{%
5160     \@namedef{ver@lastpage.sty}{1994/06/25}%
5161   }{}%
5162   \@ifpackageloaded{lastpage}{%
5163     \ifHy@pageanchor
5164     \else
5165       \Hy@WarningNoLine{%
5166         The \string\pageref{LastPage} link doesn't work\MessageBreak
5167         with disabled option 'pageanchor'%
5168       }%
5169     \fi
5170     \def\lastpage@putlabel{%
5171       \addtocounter{page}{-1}%
5172       \if@filesn
5173         \begingroup
5174           \let\@number\@firstofone
5175           \ifHy@pageanchor
5176             \ifHy@hypertexnames
5177               \ifHy@plainpages
5178                 \def\Hy@temp{\arabic{page}}%
5179               \else
5180                 \Hy@unicodefalse
5181                 \pdfstringdef\Hy@temp{\thepage}%
5182               \fi
5183             \else
5184               \def\Hy@temp{\the\Hy@pagecounter}%
5185             \fi
5186           \fi
5187           \immediate\write\@auxout{%
5188             \string\newlabel
5189             {LastPage}{}{\thepage}{}{%
5190               \ifHy@pageanchor page.\Hy@temp\fi}{}%
5191             }%
5192           \endgroup
5193         \fi
5194         \addtocounter{page}{1}%
5195       }%
5196     \@ifclassloaded{revtex4}{%
5197       \begingroup
5198         \toks@{\expandafter{\lastpage@putlabel}}%
5199         \edef\x{\endgroup

```

```

5200         \def\noexpand\lastpage@putlabel{%
5201             \noexpand\stepcounter{page}%
5202             \the\toks@
5203             \noexpand\addtocounter{page}\noexpand\m@ne
5204         }%
5205     }%
5206     \x
5207     }{}%
5208     }{}%
5209 }
5210 </package>
5211 <*check>
5212 \checkpackage{lastpage}[1994/06/25]
5213 \checkcommand\def\lastpage@putlabel{%
5214     \addtocounter{page}{-1}%
5215     \immediate\write\@auxout{%
5216         \string\newlabel{LastPage}{{}\{\thepage}}%
5217     }%
5218     \addtocounter{page}{1}%
5219 }
5220 </check>
5221 <*package>

```

30 Package ifthen support

Since version 6.75a this is done in package nameref.

For compatibility `\hypergetref` and `\hypergetpageref` are still provided. But they do not generate warnings, if the reference is undefined.

```

5222 \def\hypergetref#1{\getrefbykeydefault{#1}{\{??}}
5223 \def\hypergetpageref#1{\getrefbykeydefault{#1}{page}{0}}

```

31 Package titlesec and titletoc support

This code is contributed by Javier Bezos (Email: jbezos@arrakis.es).

Package titlesec support:

```

5224 \@ifpackageloaded{titlesec}{%
5225     \def\ttl@Hy@steplink#1{%
5226         \Hy@GlobalStepCount\Hy@linkcounter
5227         \xdef\@currentHref{#1*.\the\Hy@linkcounter}%
5228         \def\ttl@Hy@saveanchor{%
5229             \Hy@raisedlink{%
5230                 \hyper@anchorstart{\@currentHref}\hyper@anchorend
5231             }%
5232         }%
5233     }%
5234     \def\ttl@Hy@refstepcounter#1{%
5235         \let\ttl@b\Hy@raisedlink
5236         \def\Hy@raisedlink##1{%
5237             \def\ttl@Hy@saveanchor{\Hy@raisedlink{##1}}%
5238         }%
5239         \refstepcounter{#1}%
5240         \let\Hy@raisedlink\ttl@b
5241     }%
5242 }{}

```

Package titletoc support:

```
5243 \@ifpackageloaded{titletoc}{%
5244   \def\ttl@gobblecontents#1#2#3#4{\ignorespaces}%
5245 }{}
```

32 Package varioref support

Package nameref uses five arguments for the ref system. Fix provided by Felix Neubauer (felix.neubauer@gmx.net).

```
5246 \def\Hy@varioref@undefined{???}{??}{-}{-}{-}
5247 \@ifpackageloaded{varioref}{%
5248   \def\vref@pagenum#1#2{%
5249     \ifundefined{r@#2}{%
5250       \expandafter\let\csname r@#2\endcsname\Hy@varioref@undefined
5251     }{}%
5252     \edef#1{\getpagerefnumber{#2}}%
5253   }%
5254 }{}
```

33 Package longtable support

Sometimes the anchor of the longtable goes to the previous page. Thus the following patch separates the anchor setting and counter incrementation by hyperref's \refstepcounter and the anchor setting is moved after \vskip\LTpre.

Patch of \LT@array: replace \refstepcounter by the original \H@refstepcounter without anchor generation

```
5255 \@ifpackageloaded{longtable}{%
5256   \begingroup
5257     \def\y{\LT@array}%
5258     \ifundefined{scr@LT@array}{-}{\def\y{\scr@LT@array}}%
5259     \long\def\x\refstepcounter#1#2\@sharp#3#4\@nil{%
5260       \expandafter\endgroup
5261       \expandafter\def\y[#1]##2{%
5262         \H@refstepcounter{#1}%
5263         \hyper@makecurrent{table}%
5264         \let\Hy@LT@currentHlabel\@currentHlabel
5265         \let\Hy@LT@currentHref\@currentHref
5266         #2\@sharp####4%
5267       }%
5268     }%
5269     \expandafter\expandafter\expandafter\x\y[{#1}]{#2}\@nil
```

Patch of \LT@start: add anchor before first line after \vskip\LTpre

```
5270   \begingroup
5271     \def\x#1\ifvoid\LT@firsthead\copy#2\@nil{%
5272       \endgroup
5273       \def\LT@start{%
5274         #1%
5275         \let\@currentHlabel\Hy@LT@currentHlabel
5276         \let\@currentHref\Hy@LT@currentHref
5277         \Hy@raisedlink{%
5278           \hyper@anchorstart{\@currentHref}\hyper@anchorend
5279         }%
5280         \ifvoid\LT@firsthead\copy
```



```

5281      #2%
5282    }%
5283  }%
5284  \expandafter\x\LT@start\@nil
5285 }{}

```

34 Equations

We want to make the whole equation a target anchor. Overload `equation`, temporarily reverting to original `\refstepcounter`. If, however, it is in AMS math, we do not do anything, as the tag mechanism is used there (see section 41). The exception is that we move the equation incrementation inside the `math` environment to avoid specials outside and a wrong vertical spacing of equation environments.

```

5286 \let\new@refstepcounter\refstepcounter
5287 \let\H@equation\equation
5288 \let\H@endequation\endequation

5289 \@ifpackageloaded{amsmath}{%
5290   \long\def\Hy@temp{%
5291     \incr@eqnum
5292     \mathdisplay@push
5293     \st@rredfalse \global\@eqnswtrue
5294     \mathdisplay{equation}%
5295   }%
5296   \ifx\Hy@temp\equation
5297     \expandafter\ifx\csname if@fleqn\expandafter\endcsname
5298       \csname iftrue\endcsname
5299   \else
5300     \long\def\equation{%
5301       \mathdisplay@push
5302       \st@rredfalse \global\@eqnswtrue
5303       \mathdisplay{equation}%
5304       \incr@eqnum
5305     }%
5306   \fi
5307 \fi
5308 }{}%
5309 \def\equation{%
5310   \let\refstepcounter\H@refstepcounter
5311   \H@equation
5312   \@ifundefined{theHequation}{%
5313     \make@stripped@name{\theequation}%
5314     \let\theHequation\newname
5315   }{}%
5316   \hyper@makecurrent{equation}%
5317   \Hy@raisedlink{\hyper@anchorstart{\@currentHref}}%
5318   \let\refstepcounter\new@refstepcounter
5319 }%
5320 \def\endequation{\Hy@raisedlink{\hyper@anchorend}\H@endequation}%
5321 }

```

My goodness, why can't L^AT_EX be consistent? Why is `\eqnarray` set up differently from other objects?

People (you know who you are, Thomas Beuth) sometimes make an `eqnarray` where *all* the lines end with `\notag`, so there is no suitable anchor at all. In this case, pass by on the other side.

```

5322 \newif\if@eqnstar
5323 \@eqnstarfalse
5324 \let\H@eqnarray\eqnarray
5325 \let\H@endeqnarray\endeqnarray
5326 \def\eqnarray{%
5327   \let\Hy@reserved@a\relax
5328   \def\@currentHref{}%
5329   \H@eqnarray
5330   \if@eqnstar
5331   \else
5332     \ifx\\ \@currentHref\\%
5333     \else
5334       \@ifundefined{theHequation}{%
5335         \make@stripped@name{\theequation}%
5336         \let\theHequation\newname
5337       }{}%
5338       \hyper@makecurrent{equation}%
5339       \hyper@anchorstart{\@currentHref}{ }\hyper@anchorend
5340     \fi
5341   \fi
5342 }
5343 \def\endeqnarray{%
5344   \H@endeqnarray
5345 }

```

This is quite heavy-handed, but it works for now. If its an eqnarray* we need to disable the hyperref actions. There may well be a cleaner way to trap this. Bill Moss found this.

```

5346 \@namedef{eqnarray*}{%
5347   \def\@eqnocr{\nonumber\@seqnocr}\@eqnstartrue\eqnarray
5348 }
5349 \@namedef{endeqnarray*}{%
5350   \nonumber\endeqnarray\@eqnstarfalse
5351 }

```

Then again, we have the *subeqnarray* package. Tanmoy provided some code for this:

```

5352 \@ifundefined{subeqnarray}{ }{%
5353   \let\H@subeqnarray\subeqnarray
5354   \let\H@endsubeqnarray\endsubeqnarray
5355   \def\subeqnarray{%
5356     \let\Hy@reserved@a\relax
5357     \H@subeqnarray
5358     \@ifundefined{theHequation}{%
5359       \make@stripped@name{\theequation}%
5360       \let\theHequation\newname
5361     }{}%
5362     \hyper@makecurrent{equation}%
5363     \hyper@anchorstart{\@currentHref}{ }\hyper@anchorend
5364   }%
5365   \def\endsubeqnarray{%
5366     \H@endsubeqnarray
5367   }%
5368   \newcommand\theHsubequation{\theHequation\alph{subequation}}%
5369 }

```

The aim of this macro is to produce a sanitized version of its argument, to make it a safe label.

```

5370 \def\make@stripped@name#1{%
5371   \begingroup
5372     \escapechar\m@ne

```

```

5373 \global\let\newname\@empty
5374 \protected@edef\Hy@tempa{#1}%
5375 \edef\@tempb{%
5376   \noexpand\@tfor\noexpand\Hy@tempa:=%
5377   \expandafter\strip@prefix\meaning\Hy@tempa
5378 }%
5379 \@tempb\do{%
5380   \if\Hy@tempa\else
5381     \if}\Hy@tempa\else
5382     \xdef\newname{\newname\Hy@tempa}%
5383   \fi
5384   \fi
5385 }%
5386 \endgroup
5387 }

```

Support for amsmath's subequations:

```

5388 \begingroup\expandafter\expandafter\expandafter\endgroup
5389 \expandafter\ifx\csname subequations\endcsname\relax
5390 \else
5391   \let\HyOrg@subequations\subequations
5392   \def\subequations{%
5393     \stepcounter{equation}%
5394     \protected@edef\theHparentequation{%
5395       \ifundefined{theHequation}\theequation\theHequation
5396     }%
5397     \addtocounter{equation}{-1}%
5398     \HyOrg@subequations
5399     \def\theHequation{\theHparentequation\alph{equation}}%
5400     \ignorespaces
5401   }%
5402 \fi

```

Support for package amsthm (Daniel Müllner):

```

5403 \@ifpackageloaded{amsthm}{%
5404   \def\@thm#1#2#3{%
5405     \ifhmode
5406       \unskip\unskip\par
5407     \fi
5408     \normalfont
5409     \trivlist
5410     \let\thmheadnl\relax
5411     \let\thm@swap\@gobble
5412     \thm@notefont{\fontseries\mddefault\upshape}%
5413     \thm@headpunct{.}% add period after heading
5414     \thm@headsep 5\p@ plus\p@ minus\p@\relax
5415     \thm@space@setup
5416     #1% style overrides
5417     \@topsep \thm@preskip % used by thm head
5418     \@topsepadd \thm@postskip % used by \@endparenv
5419     \def\dth@counter{#2}%
5420     \ifx\@empty\dth@counter
5421       \def\@tempa{%
5422         \@oparg{\@begintheorem{#3}{}} []%
5423       }%
5424     \else
5425       \H@refstepcounter{#2}%
5426       \hyper@makecurrent{#2}%

```

```

5427     \def\@tempa{%
5428       \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}{[]}
5429     }%
5430     \fi
5431     \@tempa
5432   }%
5433   \dth@everypar={%
5434     \@minipagefalse
5435     \global\@newlistfalse
5436     \@noparitemfalse
5437     \if@inlabel
5438       \global\@inlabelfalse
5439     \begingroup
5440       \setbox\z@\lastbox
5441       \ifvoid\z@
5442         \kern-\itemindent
5443       \fi
5444     \endgroup
5445     \ifx\@empty\dth@counter
5446     \else
5447       \Hy@raisedlink{%
5448         \hyper@anchorstart{\@currentHref}\hyper@anchorend
5449       }%
5450     \fi
5451     \unhbox\@labels
5452   \fi
5453   \if@nobreak
5454     \@nobreakfalse \clubpenalty\@M
5455   \else
5456     \clubpenalty\@clubpenalty \everypar{}%
5457   \fi
5458 }%
5459 }{}

```

35 Footnotes

The footnote mark is a hypertext link, and the text is a target. We separately number the footnotes sequentially through the text, separately from whatever labels the text assigns. Too hard to keep track of markers otherwise. If the raw forms `\footnotemark` and `\footnotetext` are used, force them to use un-hyper original.

Tabularx causes footnote problems, disable the linking if that is loaded.

```

5460 \@ifpackageloaded{tabularx}{\Hy@hyperfootnotesfalse}{}
5461 \ifHy@hyperfootnotes
5462   \newcounter{Hfootnote}%
5463   \let\H@@footnotetext\@footnotetext
5464   \let\H@@footnotemark\@footnotemark
5465   \def\@xfootnotenext[#1]{%
5466     \begingroup
5467       \csname c@\@mpfn\endcsname #1\relax
5468       \unrestored@protected@xdef\@thefnmark{\thempfn}%
5469     \endgroup
5470     \ifx\@footnotetext\@mpfootnotetext
5471       \expandafter\H@@mpfootnotetext
5472     \else
5473       \expandafter\H@@footnotetext
5474     \fi

```

```

5475 }%
5476 \def\@footnotemark[#1]{%
5477   \begingroup
5478     \c@footnote #1\relax
5479     \unrestored@protected@xdef\@thefnmark{\thefootnote}%
5480   \endgroup
5481   \H@@footnotemark
5482 }%
5483 \let\H@@mpfootnotetext\@mpfootnotetext
5484 \long\def\@mpfootnotetext#1{%
5485   \H@@mpfootnotetext{%
5486     \ifHy@nesting
5487       \hyper@@anchor{\Hy@footnote@currentHref}{#1}%
5488     \else
5489       \Hy@raisedlink{%
5490         \hyper@@anchor{\Hy@footnote@currentHref}{\relax}%
5491       }#1%
5492     \fi
5493   }%
5494 }%
5495 \long\def\@footnotetext#1{%
5496   \H@@footnotetext{%
5497     \ifHy@nesting
5498       \hyper@@anchor{\Hy@footnote@currentHref}{#1}%
5499     \else
5500       \Hy@raisedlink{%
5501         \hyper@@anchor{\Hy@footnote@currentHref}{\relax}%
5502       }%
5503       \let\@currentHlabel\Hy@footnote@currentHlabel
5504       \let\@currentHref\Hy@footnote@currentHref
5505       \let\@currentlabelname\@empty
5506       #1%
5507     \fi
5508   }%
5509 }%

```

Redefine \@footnotemark, borrowing its code (at the cost of getting out of sync with latex.ltx), to take advantage of its white space and hyphenation fudges. If we just overload it, we can get variant documents (the word before the footnote is treated differently). Thanks to David Carlisle and Brian Ripley for confusing and helping me on this.

```

5510 \def\@footnotemark{%
5511   \leavevmode
5512   \ifhmode\edef\x@sf{\the\spacefactor}\nobreak\fi
5513   \stepcounter{Hfootnote}%
5514   \global\let\Hy@saved@currentHlabel\@currentHlabel
5515   \global\let\Hy@saved@currentHref\@currentHref
5516   \hyper@makecurrent{Hfootnote}%
5517   \global\let\Hy@footnote@currentHlabel\@currentHlabel
5518   \global\let\Hy@footnote@currentHref\@currentHref
5519   \global\let\@currentHlabel\Hy@saved@currentHlabel
5520   \global\let\@currentHref\Hy@saved@currentHref
5521   \hyper@linkstart{link}{\Hy@footnote@currentHref}%
5522   \@makefnmark
5523   \hyper@linkend
5524   \ifhmode\spacefactor\x@sf\fi
5525   \relax
5526 }%

```

Support for footnotes in p columns of longtable. Here \footnote commands are splitted into \footnotemark and a call of \footnotetext with the optional argument, that is not supported by hyperref. The result is a link by \footnotemark without valid anchor

```

5527 \@ifpackageloaded{longtable}{%
5528   \CheckCommand*{\LT@p@ftntext}[1]{%
5529     \edef\@tempa{%
5530       \the\LT@p@ftn
5531       \noexpand\footnotetext[\the\c@footnote]%
5532     }%
5533     \global\LT@p@ftn\expandafter{\@tempa{#1}}%
5534   }%
5535   \long\def\LT@p@ftntext#1{%
5536     \edef\@tempa{%
5537       \the\LT@p@ftn
5538       \begingroup
5539         \noexpand\c@footnote=\the\c@footnote\relax
5540         \noexpand\protected@xdef
5541           \noexpand\@thefnmark{\noexpand\thempfn}%
5542         \noexpand\protected@xdef\noexpand\@thefnmark{%
5543           \noexpand\thempfn
5544         }%
5545         \expandafter\expandafter\expandafter\noexpand
5546         \expandafter\expandafter\expandafter\Hy@LT@footnotetext
5547         \expandafter\expandafter\expandafter{%
5548           \expandafter\Hy@footnote@currentHref\expandafter
5549           }\expandafter{\Hy@footnote@currentHlabel}%
5550       }%
5551       \global\LT@p@ftn\expandafter{%
5552         \@tempa{#1}%
5553       }\endgroup
5554     }%
5555   }%
5556   \long\def\Hy@LT@footnotetext#1#2#3{%
5557     \H@@footnotetext{%
5558       \ifHy@nesting
5559         \hyper@@anchor{#1}{#3}%
5560       \else
5561         \Hy@raisedlink{%
5562           \hyper@@anchor{#1}{\relax}%
5563         }%
5564         \def\@currentHlabel{#2}%
5565         \def\@currentHref{#1}%
5566         \let\@currentlabelname\@empty
5567         #3%
5568       \fi
5569     }%
5570   }%
5571 }-%

```

Footnotes for fancyvrb (Fix by Manuel Pégourié-Gonnard).

```

5572 \@ifpackageloaded{fancyvrb}{%
5573   \def\V@@footnotetext{%
5574     \insert\footins\bgroup
5575     \csname reset@font\endcsname
5576     \footnotesize
5577     \interlinepenalty\interfootnotelinepenalty

```

```

5578 \splittopskip\footnotesep
5579 \splitmaxdepth\dp\strutbox
5580 \floatingpenalty \@MM
5581 \hsize\columnwidth
5582 \@parboxrestore
5583 \edef\@currentlabel{\csname p@footnote\endcsname\@thefnmark}%
5584 \@makefnmark}%
5585 \rule{\z@}{\footnotesep}%
5586 \bgroup
5587 \aftergroup\V@@@footnotetext
5588 \Hy@raisedlink{%
5589 \hyper@@anchor{\Hy@footnote@currentHref}{\relax}%
5590 }%
5591 \let\@currentHlabel\Hy@footnote@currentHlabel
5592 \let\@currentHref\Hy@footnote@currentHref
5593 \let\@currentlabelname\@empty
5594 \ignorespaces
5595 }%
5596 }{}%

```

But the special footnotes in `\maketitle` are much too hard to deal with properly. Let them revert to plain behaviour. The koma classes add an optional argument.

```

5597 \let\HyOrg@maketitle\maketitle
5598 \def\maketitle{%
5599 \let\Hy@saved@footnotemark\@footnotemark
5600 \let\Hy@saved@footnotetext\@footnotetext
5601 \let\@footnotemark\H@@footnotemark
5602 \let\@footnotetext\H@@footnotetext
5603 \@ifnextchar[\Hy@maketitle@optarg{% ]
5604 \HyOrg@maketitle
5605 \Hy@maketitle@end
5606 }%
5607 }%
5608 \def\Hy@maketitle@optarg[#1]{%
5609 \HyOrg@maketitle[#{#1}]%
5610 \Hy@maketitle@end
5611 }%
5612 \def\Hy@maketitle@end{%
5613 \ifx\@footnotemark\H@@footnotemark
5614 \let\@footnotemark\Hy@saved@footnotemark
5615 \fi
5616 \ifx\@footnotetext\H@@footnotetext
5617 \let\@footnotetext\Hy@saved@footnotetext
5618 \fi
5619 }%

```

`\realfootnote` Does anyone remember the function and purpose of `\realfootnote`?

```

5620 \def\realfootnote{%
5621 \ifnextchar[\@xfootnote{%
5622 \stepcounter{\@mpfn}%
5623 \protected@xdef\@thefnmark{\thempfn}%
5624 \H@@footnotemark\H@@footnotetext
5625 }%
5626 }%
5627 \fi
5628 \Hy@DisableOption{hyperfootnotes}

```

```

5629 </package>
5630 <*check>
5631 \checklatex
5632 \checkcommand\def\xfootnotenext[#1]{%
5633   \begingroup
5634     \csname c@\mpfn\endcsname #1\relax
5635     \unrestored@protected@xdef\@thefnmark{\thempfn}%
5636   \endgroup
5637   \@footnotetext
5638 }
5639 \checkcommand\def\xfootnotemark[#1]{%
5640   \begingroup
5641     \c@footnote #1\relax
5642     \unrestored@protected@xdef\@thefnmark{\thefootnote}%
5643   \endgroup
5644   \@footnotemark
5645 }
5646 \checkcommand\def\@footnotemark{%
5647   \leavevmode
5648   \ifhmode\edef\x@sf{\the\spacefactor}\nobreak\fi
5649   \@makefnmark
5650   \ifhmode\spacefactor\x@sf\fi
5651   \relax
5652 }
5653 </check>
5654 <*package>

```

36 Float captions

Make the float caption the hypertext anchor; curiously enough, we can't just copy the definition of `\@caption`. Its all to do with expansion. It screws up. Sigh.

```

5655 \def\caption{%
5656   \ifx\@captive\@undefined
5657     \latexerror{\noexpand\caption outside float}\@ehd
5658     \expandafter\@gobble
5659   \else
5660     \H@refstepcounter\@captive
5661     \let\Hy@tempa\@caption
5662     \@ifundefined{float@caption}{%
5663       {%
5664         \expandafter\ifx\csname @float@c@\@captive\endcsname
5665           \float@caption
5666         \let\Hy@tempa\Hy@float@caption
5667       \fi
5668     }%
5669     \expandafter\@firstofone
5670   \fi
5671   {\@dblarg{\Hy@tempa\@captive}}%
5672 }
5673 \long\def\@caption#1[#2]#3{%
5674   \expandafter\ifx\csname if@capstart\expandafter\endcsname
5675     \csname iftrue\endcsname
5676     \global\let\@currentHref\hc@currentHref
5677   \else
5678     \hyper@makecurrent{\@captive}%
5679   \fi

```



```

5680 \def\@currentlabelname{#2}%
5681 \par\addcontentsline{\csname ext@#1\endcsname}{#1}{%
5682 \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
5683 }%
5684 \begingroup
5685 \@parboxrestore
5686 \if@minipage
5687 \setminipage
5688 \fi
5689 \normalsize
5690 \expandafter\ifx\csname if@capstart\expandafter\endcsname
5691 \csname iftrue\endcsname
5692 \global\@capstartfalse
5693 \makecaption{\csname fnum@#1\endcsname}{\ignorespaces#3}%
5694 \else
5695 \makecaption{\csname fnum@#1\endcsname}{%
5696 \ignorespaces

```

If we cannot have nesting, the anchor is empty.

```

5697 \ifHy@nesting
5698 \hyper@@anchor{\@currentHref}{#3}%
5699 \else
5700 \Hy@raisedlink{\hyper@@anchor{\@currentHref}{\relax}}#3%
5701 \fi
5702 }%
5703 \fi
5704 \par
5705 \endgroup
5706 }

```

Compatibility with float.sty: anchor setting at the top of the float, if the float is controlled by float.sty. Several \caption commands inside one float are not supported.

```

5707 \let\Hy@float@caption\@caption
5708 \ifpackageloaded{float}{%
5709 \def\Hy@float@caption{%
5710 \ifx\Hy@float@currentHref\@undefined
5711 \hyper@makecurrent{\@captype}%
5712 \global\let\Hy@float@currentHref\@currentHref
5713 \else
5714 \let\@currentHref\Hy@float@currentHref
5715 \fi
5716 \float@caption
5717 }%
5718 \let\HyOrg@float@makebox\float@makebox
5719 \renewcommand{\float@makebox}[1]{%
5720 \HyOrg@float@makebox{%
5721 #1\relax
5722 \ifx\Hy@float@currentHref\@undefined
5723 \else
5724 \hyper@@anchor{\Hy@float@currentHref}{\relax}%
5725 \global\let\Hy@float@currentHref\@undefined
5726 \fi
5727 }%
5728 }%
5729 }{}
5730 \endpackage
5731 \ifcheck
5732 \checklatex[1999/06/01 - 2000/06/01]

```

```

5733 \checkcommand\def\caption{%
5734   \ifx\@capttype\undefined
5735     \@latex@error{\noexpand\caption outside float}\@ehd
5736     \expandafter\@gobble
5737   \else
5738     \refstepcounter\@capttype
5739     \expandafter\@firstofone
5740   \fi
5741   {\@dblarg{\@caption\@capttype}}%
5742 }
5743 \checkcommand\long\def\@caption#1[#2]#3{%
5744   \par
5745   \addcontentsline{\csname ext@#1\endcsname}{#1}%
5746   {\protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}}%
5747   \begingroup
5748     \@parboxrestore
5749     \if@minipage
5750       \setminipage
5751     \fi
5752     \normalsize
5753     \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces #3}\par
5754   \endgroup
5755 }
5756 </check>
5757 <*package>

```

37 Bibliographic references

This is not very robust, since many styles redefine these things. The package used to redefine `\@citex` and the like; then we tried adding the `hyperref` call explicitly into the `.aux` file. Now we redefine `\bibcite`; this still breaks some citation packages so we have to work around them. But this remains extremely dangerous. Any or all of *achemso* and *drfcite* may break.

However, let's make an attempt to get *natbib* right, because that's a powerful, important package. Patrick Daly (daly@linmpi.mpg.de) has provided hooks for us, so all we need to do is activate them.

```

5758 \def\hyper@natlinkstart#1{%
5759   \Hy@backout{#1}%
5760   \hyper@linkstart{cite}{cite.#1}%
5761   \def\hyper@nat@current{#1}%
5762 }
5763 \def\hyper@natlinkend{%
5764   \hyper@linkend
5765 }
5766 \def\hyper@natlinkbreak#1#2{%
5767   \hyper@linkend#1\hyper@linkstart{cite}{cite.#2}%
5768 }
5769 \def\hyper@natanchorstart#1{%
5770   \Hy@raisedlink{\hyper@anchorstart{cite.#1}}%
5771 }
5772 \def\hyper@natanchorend{\hyper@anchorend}

```

Do not play games if we have *natbib* support. Macro `extra@binfo` added for *chapterbib* support. *Chapterbib* also wants `\@extra@binfo` in the hyper-link, but since the link tag is not expanded immediately, we use `\@extra@b@citeb`, so cites in a chapter will link to the bibliography in that chapter.

```

5773 \@ifundefined{NAT@parse}{%
5774   \providecommand*\@extra@binfo{}%
5775   \providecommand*\@extra@b@citeb{}%
5776   \def\bibcite#1#2{%
5777     \newl@bel{b}{#1\@extra@binfo}{%
5778       \hyper@link[cite]{}{cite.#1\@extra@b@citeb}{#2}%
5779     }%
5780   }%
5781   \gdef\@extra@binfo{}%

```

Package babel redefines \bibcite with macro \bbl@cite@choice. It needs to be overwritten to avoid the warning “Label(s) may have changed.”.

```

5782 \let\Hy@bibcite\bibcite
5783 \begingroup
5784   \@ifundefined{bbl@cite@choice}{}{%
5785     \g@addto@macro\bbl@cite@choice{%
5786       \let\bibcite\Hy@bibcite
5787     }%
5788   }%
5789 \endgroup

```

\@BIBLABEL is working around a ‘feature’ of RevT_EX.

```

5790 \providecommand*\@BIBLABEL{\@biblabel}%
5791 \def\@lbibitem[#1]#2{%
5792   \@skiphyperreftrue
5793   \H@item[%
5794     \ifx\Hy@raisedlink\@empty
5795       \hyper@anchorstart{cite.#2\@extra@b@citeb}%
5796       \@BIBLABEL{#1}%
5797       \hyper@anchorend
5798     \else
5799       \Hy@raisedlink{%
5800         \hyper@anchorstart{cite.#2\@extra@b@citeb}\hyper@anchorend
5801       }%
5802       \@BIBLABEL{#1}%
5803     \fi
5804     \hfill
5805   ]%
5806   \@skiphyperreffalse
5807   \if@filesw
5808     \begingroup
5809       \let\protect\@noexpand
5810       \immediate\write\@auxout{%
5811         \string\bibcite{#2}{#1}%
5812       }%
5813     \endgroup
5814   \fi
5815   \ignorespaces
5816 }%

```

Since \bibitem is doing its own labelling, call the raw version of \item, to avoid extra spurious labels

```

5817 \def\@bibitem#1{%
5818   \@skiphyperreftrue\H@item\@skiphyperreffalse
5819   \Hy@raisedlink{%
5820     \hyper@anchorstart{cite.#1\@extra@b@citeb}\relax\hyper@anchorend
5821   }%
5822   \if@filesw
5823     \begingroup

```

```

5824         \let\protect\noexpand
5825         \immediate\write\@auxout{%
5826             \string\bibcite{#1}{\the\value{\@listctr}}}%
5827         }%
5828     \endgroup
5829     \fi
5830     \ignorespaces
5831 }%
5832 }{}

5833 </package>
5834 <*check>
5835 \checklatex
5836 \checkcommand\def\@lbibitem[#1]#2{%
5837     \item[\@biblabel{#1}\hfill]%
5838     \if@files
5839     {%
5840         \let\protect\noexpand
5841         \immediate\write\@auxout{%
5842             \string\bibcite{#2}{#1}%
5843         }%
5844     }%
5845     \fi
5846     \ignorespaces
5847 }
5848 \checkcommand\def\@bibitem#1{%
5849     \item
5850     \if@files
5851     \immediate\write\@auxout{%
5852         \string\bibcite{#1}{\the\value{\@listctr}}}%
5853     }%
5854     \fi
5855     \ignorespaces
5856 }
5857 </check>
5858 <*package>

```

RevTeX (bless its little heart) takes over `\bibcite` and looks at the result to measure something. Make this a hypertext link and it goes ape. Therefore, make an anodyne result first, call its business, then go back to the real thing.

```

5859 \@ifclassloaded{revtex}{%
5860     \Hy@Info{*** compatibility with revtex **** }%
5861     \def\revtex@checking#1#2{%
5862         \expandafter\let\expandafter\T@temp\csname b@#1\endcsname
5863         \expandafter\def\csname b@#1\endcsname{#2}%
5864         \@SetMaxRnhefLabel{#1}%
5865         \expandafter\let\csname b@#1\endcsname\T@temp
5866     }%

```

Tanmoy provided this replacement for CITE_X. Lord knows what it does. For chapterbib added: `extra@b@citeb`

```

5867     \@ifundefined{CITE}{\def\CITE{\@cite}}{}%
5868     \providecommand*\@extra@b@citeb{}%
5869     \def\CITE[#1]#2{%
5870         \let\@citea\@empty
5871         \leavevmode
5872         \unskip
5873         $^{}%

```

```

5874 \scriptstyle
5875 \@CITE{%
5876   \@for\@citeb:=#2\do{%
5877     \@citea
5878     \def\@citea{\penalty\@m\ }%
5879     \edef\@citeb{\expandafter\@firstofone\@citeb}%
5880     \if@filesw
5881       \immediate\write\@auxout{\string\citation{\@citeb}}%
5882     \fi
5883     \@ifundefined{b@\@citeb\extra@b@citeb}{%
5884       \mbox{\reset@font\bfseries ?}%
5885       \G@refundefinedtrue
5886       \@latex@warning{%
5887         Citation '\@citeb' on page \thepage \space undefined%
5888       }%
5889     }{%
5890       {\csname b@\@citeb\extra@b@citeb\endcsname}%
5891     }%
5892   }%
5893 }{\#1}%
5894 }$%
5895 }%

```

No, life is too short. I am not going to understand the Revtex \@collapse macro, I shall just restore the original behaviour of \@citex; sigh. This is SO vile.

```

5896 \def\@citex[#1]#2{%
5897   \let\@citea\@empty
5898   \@cite{%
5899     \@for\@citeb:=#2\do{%
5900       \@citea
5901       \def\@citea{\penalty\@m\ }%
5902       \edef\@citeb{\expandafter\@firstofone\@citeb}%
5903       \if@filesw
5904         \immediate\write\@auxout{\string\citation{\@citeb}}%
5905       \fi
5906       \@ifundefined{b@\@citeb\extra@b@citeb}{%
5907         \mbox{\reset@font\bfseries ?}%
5908         \G@refundefinedtrue
5909         \@latex@warning{%
5910           Citation '\@citeb' on page \thepage \space undefined%
5911         }%
5912       }{%
5913         \hbox{\csname b@\@citeb\extra@b@citeb\endcsname}%
5914       }%
5915     }%
5916   }{\#1}%
5917 }%
5918 }{}

```

37.1 Package harvard

Override Peter Williams' Harvard package; we have to a) make each of the citation types into a link; b) make each citation write a backref entry, and c) kick off a backreference section for each bibliography entry.

The redefinitions have to be deferred to \begin{document}, because if harvard.sty is loaded and html.sty is present and detects pdfTEX, then hyperref is already loaded at the begin of harvard.sty, and the \newcommand macros causes error messages.

```

5919 \@ifpackageloaded{harvard}{%
5920   \AtBeginDocument{%
5921     \Hy@Info{*** compatibility with harvard **** }%
5922     \Hy@raiselinksfalse
5923     \def\harvardcite#1#2#3#4{%
5924       \global\@namedef{HAR@fn@#1}{\hyper@link[cite]{}{cite.#1}{#2}}%
5925       \global\@namedef{HAR@an@#1}{\hyper@link[cite]{}{cite.#1}{#3}}%
5926       \global\@namedef{HAR@yr@#1}{\hyper@link[cite]{}{cite.#1}{#4}}%
5927       \global\@namedef{HAR@df@#1}{\csname HAR@fn@#1\endcsname}%
5928     }%
5929     \def\HAR@citetoaux#1{%
5930       \if@filesw\immediate\write\@auxout{\string\citation{#1}}\fi%
5931       \ifHy@backref
5932         \ifx\@empty\@currentlabel
5933           \else
5934             \@bsphack
5935             \if@filesw
5936               \protected@write\@auxout{}{%
5937                 \string\writefile{brf}{%
5938                   \string\backcite{#1}{%
5939                     {\thepage}{\@currentlabel}{\@currentHref}%
5940                   }%
5941                 }%
5942             }%
5943           \fi
5944           \@esphack
5945         \fi
5946       \fi
5947     }%
5948     \def\harvarditem{%
5949       \@ifnextchar[{\@harvarditem}{\@harvarditem[\null]}%
5950     }%
5951     \def\@harvarditem[#1]#2#3#4#5\par{%
5952       \item[]%
5953       \hyper@anchorstart{cite.#4}\relax\hyper@anchorend
5954       \if@filesw
5955         \begingroup
5956           \def\protect##1{\string ##1\space}%
5957           \ifthenelse{\equal{#1}{\null}}%
5958             {\def\next{{#4}{#2}{#3}}}%
5959             {\def\next{{#4}{#2}{#1}{#3}}}%
5960           \immediate\write\@auxout{\string\harvardcite\codeof\next}%
5961         \endgroup
5962       \fi
5963       \protect\hspace*{-\labelwidth}%
5964       \protect\hspace*{-\labelsep}%
5965       \ignorespaces
5966       #5%
5967       \ifHy@backref
5968         \newblock
5969         \backref{\csname br@#4\endcsname}%
5970       \fi
5971     \par
5972   }%

```

`\HAR@checkcitations` Package hyperref has added `\hyper@link`, so the original test `\HAR@checkcitations` will fail every time and always will appear the “Changed labels” warning. So we have to

```

\redefine \Har@checkcitations:
5973   \long\def\HAR@checkcitations#1#2#3#4{%
5974     \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#2}}%
5975     \expandafter\ifx\csname HAR@fn@#1\endcsname\HAR@tempa
5976     \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#3}}%
5977     \expandafter\ifx\csname HAR@an@#1\endcsname\HAR@tempa
5978     \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#4}}%
5979     \expandafter\ifx\csname HAR@yr@#1\endcsname\HAR@tempa
5980     \else
5981       \@tempswatrue
5982     \fi
5983   \else
5984     \@tempswatrue
5985   \fi
5986 \else
5987   \@tempswatrue
5988 \fi
5989 }%
5990 }%

5991 }{}

```

37.2 Package chicago

The links by `\citeN` and `\shortciteN` should include the closing parentheses.

```

5992 \@ifpackageloaded{chicago}{%

```

`\citeN`

```

5993   \def\citeN{%
5994     \def\@citesep{-1000}%
5995     \def\@cite##1##2{##1}%
5996     \def\citeauthoryear##1##2##3{##1 (##3\@cite@opt)}%
5997     \@citedata@opt
5998   }%

```

`\shortciteN`

```

5999   \def\shortciteN{%
6000     \def\@citesep{-1000}%
6001     \def\@cite##1##2{##1}%
6002     \def\citeauthoryear##1##2##3{##2 (##3\@cite@opt)}%
6003     \@citedata@opt
6004   }%

```

`\@citedata@opt`

```

6005   \def\@citedata@opt{%
6006     \let\@cite@opt\empty
6007     \@ifnextchar [{%
6008       \@tempswatrue
6009       \@citedatax@opt
6010     }{%
6011       \@tempswafalse
6012       \@citedatax[]%
6013     }%
6014   }%

```

\@citedatax@opt

```

6015 \def\@citedatax@opt[#1]{%
6016   \def\@cite@opt{, #1}%
6017   \@citedatax[#1]}%
6018 }%
6019 }{}

```

38 Page numbers

The last page should not contain a /Dur key, because there is no page after the last page. Therefore at the last page there should be a command \hypersetup{pdfpageduration={}}. This can be set with \AtEndDocument, but it can be too late, if the last page is already finished, or too early, if lots of float pages will follow. Therefore currently nothing is done by hyperref.

This where we supply a destination for each page.

```

6020 \def\Hy@EveryPageAnchor{%
6021   \Hy@DistillerDestFix
6022   \ifHy@pageanchor
6023     \ifHy@hypertextnames
6024       \ifHy@plainpages
6025         \def\Hy@TempPageAnchor{\hyper@@anchor{page.\the\c@page}}%
6026       \else
6027         \begingroup
6028         \let\@number\@firstofone
6029         \Hy@unicodetofalse
6030         \pdfstringdef\@the@H@page{\thepage}%
6031       \endgroup
6032       \def\Hy@TempPageAnchor{\hyper@@anchor{page.\@the@H@page}}%
6033     \fi
6034   \else
6035     \Hy@GlobalStepCount\Hy@pagecounter
6036     \def\Hy@TempPageAnchor{\hyper@@anchor{page.\the\Hy@pagecounter}}%
6037   \fi
6038   \vbox to 0pt{%
6039     \kern\voffset
6040     \kern\topmargin
6041     \kern-1bp\relax
6042     \hbox to 0pt{%
6043       \kern\hoffset
6044       \kern\ifodd\value{page}%
6045         \oddsidemargin
6046       \else
6047         \evensidemargin
6048       \fi
6049       \kern-1bp\relax
6050       \Hy@TempPageAnchor
6051     \hss
6052   }%
6053   \vss
6054 }%
6055 \fi
6056 }
6057 \g@addto@macro\Hy@EveryPageBoxHook{%
6058   \Hy@EveryPageAnchor
6059 }

```


39 Table of contents

TV Raman noticed that people who add arbitrary material into the TOC generate a bad or null link. We avoid that by checking if the current destination is empty. But if ‘the most recent destination’ is not what you expect, you will be in trouble.

```
6060 \begingroup\expandafter\expandafter\expandafter\endgroup
6061 \expandafter\ifx\csname chapter\endcsname\relax
6062   \def\toclevel@part{0}%
6063 \else
6064   \def\toclevel@part{-1}%
6065 \fi
6066 \def\toclevel@chapter{0}
6067 \def\toclevel@section{1}
6068 \def\toclevel@subsection{2}
6069 \def\toclevel@subsubsection{3}
6070 \def\toclevel@paragraph{4}
6071 \def\toclevel@subparagraph{5}
6072 \def\toclevel@figure{0}
6073 \def\toclevel@table{0}
6074 \@ifpackageloaded{listings}{%
6075   \providecommand*\theHlstlisting{\thelstlisting}%
6076   \providecommand*\toclevel@lstlisting{0}%
6077 }{}
6078 \@ifpackageloaded{listing}{%
6079   \providecommand*\theHlisting{\thelisting}%
6080   \providecommand*\toclevel@listing{0}%
6081 }{}
6082 \def\addcontentsline#1#2#3{% toc extension, type, tag
6083   \begingroup
6084     \let\label\@gobble
6085     \ifx\@currentHref\@empty
6086       \Hy@Warning{%
6087         No destination for bookmark of \string\addcontentsline,%
6088         \MessageBreak destination is added%
6089       }%
6090       \phantomsection
6091     \fi
6092     \expandafter\ifx\csname toclevel@#2\endcsname\relax
6093       \begingroup
6094         \def\Hy@tempa{#1}%
6095         \ifx\Hy@tempa\Hy@bookmarkstype
6096           \Hy@WarningNoLine{%
6097             bookmark level for unknown #2 defaults to 0%
6098           }%
6099         \else
6100           \Hy@Info{bookmark level for unknown #2 defaults to 0}%
6101         \fi
6102       \endgroup
6103       \expandafter\gdef\csname toclevel@#2\endcsname{0}%
6104     \fi
6105     \edef\Hy@toclevel{\csname toclevel@#2\endcsname}%
6106     \Hy@writebookmark{\csname the#2\endcsname}%
6107       {#3}%
6108       {\@currentHref}%
6109       {\Hy@toclevel}%
6110       {#1}%
6111     \ifHy@verbose
```

```

6112 \def\Hy@tempa{#3}%
6113 \@onelevel@sanitize\Hy@tempa
6114 \typeout{pdftex: bookmark at \the\inputlineno: %
6115 {\csname the#2\endcsname}%
6116 {\Hy@tempa}%
6117 {\@currentHref}%
6118 {\Hy@toclevel}%
6119 {#1}%
6120 }%
6121 \fi
6122 \addtocontents{#1}{%
6123 \protect\contentsline{#2}{#3}{\thepage}{\@currentHref}%
6124 }%
6125 \endgroup
6126 }
6127 \def\contentsline#1#2#3#4{%
6128 \ifx\#4\%
6129 \csname l@#1\endcsname{#2}{#3}%
6130 \else
6131 \ifcase\Hy@linktoc % none
6132 \csname l@#1\endcsname{#2}{#3}%
6133 \or % section
6134 \csname l@#1\endcsname{%
6135 \hyper@linkstart{link}{#4}{#2}\hyper@linkend
6136 }{#3}%
6137 \or % page
6138 \csname l@#1\endcsname{#2}{#3}%
6139 \hyper@linkstart{link}{#4}{#3}\hyper@linkend
6140 }%
6141 \else % all
6142 \csname l@#1\endcsname{%
6143 \hyper@linkstart{link}{#4}{#2}\hyper@linkend
6144 }{#3}%
6145 \hyper@linkstart{link}{#4}{#3}\hyper@linkend
6146 }%
6147 \fi
6148 \fi
6149 }
6150 \</package>
6151 \<*check>
6152 \checklatex
6153 \checkcommand\def\addcontentsline#1#2#3{%
6154 \addtocontents{#1}{\protect\contentsline{#2}{#3}{\thepage}}%
6155 }
6156 \checkcommand\def\contentsline#1{\csname l@#1\endcsname}
6157 \</check>
6158 \<*package>

```

40 New counters

The whole theorem business makes up new counters on the fly; we are going to intercept this. Sigh. Do it at the level where new counters are defined.

```

6159 \let\H@definecounter\@definecounter
6160 \def\@definecounter#1{%
6161 \H@definecounter{#1}%
6162 \expandafter\def\csname theH#1\endcsname{\arabic{#1}}%

```

```
6163 }
```

But what if they have used the optional argument to e.g. `\newtheorem` to determine when the numbering is reset? OK, we'll trap that too.

```
6164 \let\H@newctr\@newctr
6165 \def\@newctr#1[#2]{%
6166   \H@newctr#1[#2]}%
6167 \expandafter\def\csname theH#1\endcsname{%
6168   \csname the\@ifundefined{theH#2}{H}#2\endcsname.\arabic{#1}%
6169 }%
6170 }
```

41 AMS \LaTeX compatibility

Oh, no, they don't use anything as simple as `\refstepcounter` in the AMS! We need to intercept some low-level operations of theirs. Damned if we are going to try and work out what they get up to. Just stick a label of 'AMS' on the front, and use the label *they* worked out. If that produces something invalid, I give up. They'll change all the code again anyway, I expect (SR).

Version 6.77p uses a patch by Ross Moore.

```
6171 \ifpackageloaded{amsmath}{%
6172   \def\Hy@make@anchor{%
6173     \Hy@GlobalStepCount\Hy@linkcounter
6174     \xdef\@currentHref{AMS.\the\Hy@linkcounter}%
6175     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
6176   }%
6177   \def\Hy@make@df@tag@@#1{%
6178     \gdef\df@tag{%
6179       \maketag@@@{\Hy@make@anchor#1}%
6180       \def\@currentlabel{#1}%
6181     }%
6182   }%
6183   \def\Hy@make@df@tag@@@#1{%
6184     \gdef\df@tag{%
6185       \tagform@{\Hy@make@anchor#1}%
6186       \toks@{\xp{\p@equation{#1}}}%
6187       \edef\@currentlabel{\the\toks@}%
6188     }%
6189   }%
6190   \let\HyOrg@make@df@tag@@\make@df@tag@@
6191   \let\HyOrg@make@df@tag@@@ \make@df@tag@@@
6192   \let\make@df@tag@@\Hy@make@df@tag@@
6193   \let\make@df@tag@@@\Hy@make@df@tag@@@
6194 }{}
```

Only play with `\seteqlebal` if we are using pdf \TeX . Other drivers cause problems; requested by Michael Downes (AMS).

```
6195 \ifpackagewith{hyperref}{pdf $\text{\TeX}$ }{%
6196   \let\H@seteqlabel\@seteqlabel
6197   \def\@seteqlabel#1{%
6198     \H@seteqlabel{#1}%
6199     \xdef\@currentHref{AMS.\the\Hy@linkcounter}%
6200     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
6201   }%
6202 }
```

This code I simply cannot remember what I was trying to achieve. The final result seems to do nothing anyway.

```
\let\H@tagform@tagform@
\def\tagform@#1{%
  \maketag@@@{\hyper@@anchor{\@currentHref}%
    {\ignorespaces#1\unskip}}}%
}
\def\eqref#1{\textup{\H@tagform@\ref{#1}}}
```

41.1 \@addtoreset and \numberwithin patches

\@addtoreset puts a counter to the reset list of another counter. After a reset the counter starts again with perhaps already used values. Therefore the hyperref version of the counter print command \theHcounter is redefined in order to add the parent counter.

```
6203 \let\HyOrg@addtoreset\@addtoreset
6204 \def\@addtoreset#1#2{%
6205   \HyOrg@addtoreset{#1}{#2}%
6206   \expandafter\xdef\csname theH#1\endcsname{%
6207     \expandafter\noexpand
6208       \csname the\@ifundefined{theH#2}{H#2\endcsname
6209       .\noexpand\the\noexpand\value{#1}}%
6210   }%
6211 }
```

\numberwithin A appropriate definition of hyperref's companion counter (\theH...) is added for correct link names.

```
6212 </package>
6213 <*check>
6214 \checkpackage{amsmath}[1999/12/14 - 2000/06/06]
6215 \checkcommand\newcommand{\numberwithin}[3][\arabic]{%
6216   \@ifundefined{c@#2}{\@nocounterr{#2}}{%
6217     \@ifundefined{c@#3}{\@nocnterr{#3}}{%
6218       \@addtoreset{#2}{#3}%
6219       \@xp\xdef\csname the#2\endcsname{%
6220         \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
6221       }%
6222     }%
6223   }%
6224 }%
6225 </check>
6226 <*package>
6227 \@ifpackageloaded{amsmath}{%
6228   \@ifpackagelater{amsmath}[1999/12/14]{%
6229     \renewcommand*\numberwithin[3][\arabic]{%
6230       \@ifundefined{c@#2}{\@nocounterr{#2}}{%
6231         \@ifundefined{c@#3}{\@nocnterr{#3}}{%
6232           \HyOrg@addtoreset{#2}{#3}%
6233           \@xp\xdef\csname the#2\endcsname{%
6234             \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
6235           }%
6236           \@xp\xdef\csname theH#2\endcsname{%
6237             \@xp\@nx
6238             \csname the\@ifundefined{theH#3}{H#3\endcsname
6239             .\@nx#1{#2}}%
6240           }%
6241         }%
6242       }%
6243     }%
6244   }%
6245 }
```

```

6242     }%
6243   }%
6244 }{%
6245   \Hy@WarningNoLine{%
6246     \string\numberwithin\space of package ‘amsmath’ %
6247     only fixed\MessageBreak
6248     for version 2000/06/06 v2.12 or newer%
6249   }%
6250 }%
6251 }{}

```

42 Included figures

Simply intercept the low level graphics package macro.

```

6252 \ifHy@figures
6253   \let\Hy@Gin@setfile\Gin@setfile
6254   \def\Gin@setfile#1#2#3{%
6255     \hyperimage{#3}{\Hy@Gin@setfile{#1}{#2}{#3}}%
6256   }%
6257 \fi
6258 \Hy@DisableOption{hyperfigures}

```

43 hyperindex entries

Internal command names are prefixed with \HyInd@.

Hyper-indexing works crudely, by forcing code onto the end of the index entry with the | feature; this puts a hyperlink around the printed page numbers. It will not proceed if the author has already used the | specifier for something like boldening entries. That would make Makeindex fail (cannot have two | specifiers). The solution is for the author to use generic coding, and put in the requisite \hyperpage in his/her own macros along with the boldness.

This section is poor stuff; it’s open to all sorts of abuse. Sensible large projects will design their own indexing macros any bypass this.

```

6259 \ifHy@hyperindex
6260   \def\HyInd@ParenLeft{ }%
6261   \def\HyInd@ParenRight{ }%
6262   \Hy@nextfalse
6263   \@ifpackageloaded{multind}{\Hy@nexttrue}{}%
6264   \@ifpackageloaded{index}{\Hy@nexttrue}{}%
6265   \begingroup
6266     \lccode‘\|’=\expandafter‘\HyInd@EncapChar\relax
6267   \lowercase{\endgroup
6268     \ifHy@next
6269       \let\HyInd@org@wrindex\@wrindex
6270       \def\@wrindex#1#2{\HyInd@wrindex{#1}#2||\}%
6271       \def\HyInd@wrindex#1#2|#3|#4\{\%
6272         \ifx\#3\%
6273           \HyInd@org@wrindex{#1}{#2|hyperpage}%
6274         \else
6275           \def\Hy@temp@A{#3}%
6276           \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
6277             \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
6278             \relax
6279           \HyInd@org@wrindex{#1}{#2|#3}%

```

```

6280         \else
6281         \HyInd@org@wrindex{#1}{#2|#3hyperpage}%
6282         \fi
6283     \fi
6284 }%
6285 \else
6286 \def\@wrindex#1{\@wrindex#1||\}%
6287 \def\@wrindex#1|#2|#3\{\%
6288 \if@files
6289 \ifx\#2\%
6290 \protected@write\@indexfile{\%
6291 \string\indexentry{#1|hyperpage}{\thepage}%
6292 }%
6293 \else
6294 \def\Hy@temp@A{#2}%
6295 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
6296 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
6297 \relax
6298 \protected@write\@indexfile{\%
6299 \string\indexentry{#1|#2}{\thepage}%
6300 }%
6301 \else
6302 \protected@write\@indexfile{\%
6303 \string\indexentry{#1|#2hyperpage}{\thepage}%
6304 }%
6305 \fi
6306 \fi
6307 \fi
6308 \endgroup
6309 \@esphack
6310 }%
6311 \fi
6312 }%
6313 \fi
6314 \Hy@DisableOption{hyperindex}
6315 \Hy@DisableOption{encap}

```

`\nohyperpage` The definition of `\nohyperpage` is just a precaution. It is used to mark code that does not belong to a page number, but `\nohyperpage` is never executed.

```

6316 \def\nohyperpage#1{#1}

```

This again is quite flaky, but allow for the common situation of a page range separated by en-rule. We split this into two different hyperlinked pages.

```

6317 \def\hyperpage#1{\%
6318 \HyInd@hyperpage#1\nohyperpage{\}\@nil
6319 }
6320 \def\HyInd@hyperpage#1\nohyperpage#2#3\@nil{\%
6321 \HyInd@@hyperpage{#1}%
6322 #2%
6323 \def\Hy@temp{#3}%
6324 \ifx\Hy@temp\@empty
6325 \else
6326 \Hy@ReturnAfterFi{\%
6327 \HyInd@hyperpage#3\@nil
6328 }%
6329 \fi
6330 }

```

```

6331 \def\HyInd@hyperpage#1{\@hyperpage#1---\}
6332 \def\@hyperpage#1--#2--#3\{%
6333   \ifx\#2\%
6334     \@commahyperpage{#1}%
6335   \else
6336     \HyInd@pagelink{#1}--\HyInd@pagelink{#2}%
6337   \fi
6338 }
6339 \def\@commahyperpage#1{\@commahyperpage#1, ,\}
6340 \def\@commahyperpage#1, #2,#3\{%
6341   \ifx\#2\%
6342     \HyInd@pagelink{#1}%
6343   \else
6344     \HyInd@pagelink{#1}, \HyInd@pagelink{#2}%
6345   \fi
6346 }

```

The argument of `\hyperpage` can be empty. And the line breaking algorithm of `Makeindex` can introduce spaces. So we have to remove them.

```

6347 \def\HyInd@pagelink#1{%
6348   \begingroup
6349   \toks@={}%
6350   \HyInd@removespaces#1 \@nil
6351   \endgroup
6352 }
6353 \def\HyInd@removespaces#1 #2\@nil{%
6354   \toks@=\expandafter{\the\toks@#1}%
6355   \ifx\#2\%
6356     \edef\x{\the\toks@}%
6357     \ifx\x\empty
6358     \else
6359       \hyperlink{page.\the\toks@}{\the\toks@}%
6360     \fi
6361   \else
6362     \Hy@ReturnAfterFi{%
6363       \HyInd@removespaces#2\@nil
6364     }%
6365   \fi
6366 }

```

44 Compatibility with foiltex

```

6367 \@ifclassloaded{foils}{%
6368   \providecommand*\ext@table{lot}%
6369   \providecommand*\ext@figure{lof}%
6370 }{}

```

45 Compatibility with seminar slide package

This requires `seminar.bg2`, version 1.6 or later. Contributions by Denis Girou (denis.girou@idris.fr).

```

6371 \@ifclassloaded{seminar}{%
6372   \Hy@seminarslidestrue\newcommand\theHslide{\arabic{slide}}}%
6373 }{}
6374 \Hy@seminarslidesfalse
6375 }

```

```

6376 \@ifpackageloaded{slidesec}{%
6377   \newcommand\theHslidesection {\arabic{slidesection}}%
6378   \newcommand\theHslidesubsection{%
6379     \theHslidesection.\arabic{slidesubsection}%
6380   }%
6381   \def\slide@heading[#1]#2{%
6382     \H@refstepcounter{slidesection}%
6383     \@addtoreset{slidesubsection}{slidesection}%
6384     \addtocontents{los}{%
6385       \protect\l@slide{\the\c@slidesection}{\ignorespaces#1}%
6386       {\SCTR}{\slideheading.\theslidesection}%
6387     }%
6388     \def\Hy@tempa{#2}%
6389     \ifx\Hy@tempa\@empty
6390     \else
6391       {%
6392         \edef\@currentlabel{%
6393           \csname p@slidesection\endcsname\theslidesection
6394         }%
6395         \makeslideheading{#2}%
6396       }%
6397     \fi
6398     \gdef\theslideheading{#1}%
6399     \gdef\theslidesubheading{}%
6400     \ifHy@bookmarksnumbered
6401       \def\Hy@slidetitle{\theslidesection\space #1}%
6402     \else
6403       \def\Hy@slidetitle{#1}%
6404     \fi
6405     \ifHy@hypertextnames
6406       \ifHy@naturalnames
6407         \hyper@@anchor{slideheading.\theslidesection}{\relax}%
6408         \Hy@writebookmark
6409           {\theslidesection}%
6410           {\Hy@slidetitle}%
6411           {slideheading.\theslidesection}%
6412           {1}%
6413           {toc}%
6414       \else
6415         \hyper@@anchor{slideheading.\theHslidesection}{\relax}%
6416         \Hy@writebookmark
6417           {\theslidesection}%
6418           {\Hy@slidetitle}%
6419           {slideheading.\theHslidesection}%
6420           {1}%
6421           {toc}%
6422       \fi
6423     \else
6424       \Hy@GlobalStepCount\Hy@linkcounter
6425       \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
6426       \Hy@writebookmark
6427         {\theslidesection}%
6428         {\Hy@slidetitle}%
6429         {slideheading.\the\Hy@linkcounter}%
6430         {1}%
6431         {toc}%
6432     \fi

```



```

6433 }%
6434 \def\slide@subheading[#1]#2{%
6435   \H@refstepcounter{slidesubsection}%
6436   \addtocontents{los}{%
6437     \protect\l@subslide{\the\c@slidesubsection}{\ignorespaces#1}%
6438     {\@SCTR}{slideheading.\theslidesubsection}%
6439   }%
6440   \def\Hy@tempa{#2}%
6441   \ifx\Hy@tempa\@empty
6442   \else
6443   {%
6444     \edef\@currentlabel{%
6445       \csname p@slidesubsection\endcsname\theslidesubsection
6446     }%
6447     \makeslidesubheading{#2}%
6448   }%
6449   \fi
6450   \gdef\theslidesubheading{#1}%
6451   \ifHy@bookmarksnumbered
6452     \def\Hy@slidetitle{\theslidesubsection\space #1}%
6453   \else
6454     \def\Hy@slidetitle{#1}%
6455   \fi
6456   \ifHy@hypertextnames
6457     \ifHy@naturalnames
6458       \hyper@@anchor{slideheading.\theslidesubsection}{\relax}%
6459       \Hy@writebookmark
6460         {\theslidesubsection}%
6461         {\Hy@slidetitle}%
6462         {slideheading.\theslidesubsection}%
6463         {2}%
6464         {toc}%
6465     \else
6466       \hyper@@anchor{slideheading.\theHslidesubsection}{\relax}%
6467       \Hy@writebookmark
6468         {\theslidesubsection}%
6469         {\Hy@slidetitle}%
6470         {slideheading.\theHslidesubsection}%
6471         {2}%
6472         {toc}%
6473     \fi
6474   \else
6475     \Hy@GlobalStepCount\Hy@linkcounter
6476     \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
6477     \Hy@writebookmark
6478       {\theslidesubsection}%
6479       {\Hy@slidetitle}%
6480       {slideheading.\the\Hy@linkcounter}%
6481       {1}%
6482       {toc}%
6483   \fi
6484 }%
6485 \providecommand*\listslidenamelist{List of Slides}%
6486 \def\listofslides{%
6487   \section*{%
6488     \listslidenamelist
6489     \@mkboth{%

```

```

6490         \expandafter\MakeUppercase\listslidenam
6491     }{%
6492         \expandafter\MakeUppercase\listslidenam
6493     }%
6494 }%
6495 \def\l@slide##1##2##3##4{%
6496     \slide@undottedcline{%
6497         \slidenumberline{##3}{\hyperlink{##4}{##2}}}%
6498     }{%
6499     }%
6500     \let\l@subslide\l@slide
6501     \@startlos
6502 }%
6503 \def\slide@contents{%
6504     \def\l@slide##1##2##3##4{%
6505         \slide@ccline{\slidenumberline{##3}{\hyperlink{##4}{##2}}}{##3}%
6506     }%
6507     \let\l@subslide\@gobblefour
6508     \@startlos
6509 }%
6510 \def\Slide@contents{%
6511     \def\l@slide##1##2##3##4{%
6512         \ifcase\lslide@flag
6513             \message{##1 ** \the\c@slidesection}%
6514             \ifnum##1>\c@slidesection
6515                 \def\lslide@flag{1}%
6516                 {%
6517                     \large
6518                     \slide@ccline{%
6519                         \slidenumberline{$\Rightarrow\bullet$}%
6520                         {\hyperlink{##4}{##2}}}%
6521                     }{##3}%
6522                 }%
6523             \else
6524                 {%
6525                     \large
6526                     \slide@ccline{%
6527                         \slidenumberline{$\surd\;\bullet$}%
6528                         {\hyperlink{##4}{##2}}}%
6529                     }{##3}%
6530                 }%
6531             \fi
6532         \or
6533             \def\lslide@flag{2}%
6534             {%
6535                 \large
6536                 \slide@ccline{%
6537                     \slidenumberline{$\bullet$}%
6538                     {\hyperlink{##4}{##2}}}%
6539                 }{##3}%
6540             }%
6541         \or
6542             {%
6543                 \large
6544                 \slide@ccline{%
6545                     \slidenumberline{$\bullet$}%
6546                     {\hyperlink{##4}{##2}}}%

```

```

6547         }{##3}%
6548     }%
6549     \fi
6550 }%
6551 \def\l@subslide##1##2##3##4{%
6552     \ifnum\lslide@flag=1 %
6553         \@undottedtocline{2}{3.8em}{3.2em}{\hyperlink{##4}{##2}}{}}%
6554     \fi
6555 }%
6556 \def\lslide@flag{0}%
6557 \@startlos
6558 }%
6559 }{}

```

This breaks TeX4ht, so leave it to last. Emend \@setref to put out a hypertext link as well as its normal text (which is used as an anchor). (\endinput have to be on the same line like \fi, or you have to use \expandafter before.)

```

6560 \ifHy@texht
6561     \expandafter\endinput
6562 \fi
6563 \let\real@setref\@setref
6564 \def\@setref#1#2#3{% csname, extract group, refname
6565     \ifx#1\relax
6566         \protect\G@refundefinedtrue
6567         \nfss@text{\reset@font\bfseries ??}%
6568         \@latex@warning{%
6569             Reference ‘#3’ on page \thepage \space undefined%
6570         }%
6571     \else
6572         \expandafter\Hy@setref@link#1\@empty\@empty\@nil{#2}%
6573     \fi
6574 }

```

\Hy@setref@link extracts the reference information entries, because \hyper@@link does not expand arguments for the automatic link type detection.

```

6575 \def\Hy@setref@link#1#2#3#4#5#6\@nil#7{%
6576     \begingroup
6577     \toks0={\hyper@@link{#5}{#4}}%
6578     \toks1=\expandafter{#7{#1}{#2}{#3}{#4}{#5}}%
6579     \edef\x{\endgroup
6580         \the\toks0 {\the\toks1 }%
6581     }%
6582     \x
6583 }
6584 \def\@pagesetref#1#2#3{% csname, extract macro, ref
6585     \ifx#1\relax
6586         \protect\G@refundefinedtrue
6587         \nfss@text{\reset@font\bfseries ??}%
6588         \@latex@warning{%
6589             Reference ‘#3’ on page \thepage \space undefined%
6590         }%
6591     \else
6592         \protect\hyper@@link
6593         {\expandafter\@fifthoffive#1}%
6594         {page.\expandafter\@secondoffive#1}%
6595         {\expandafter\@secondoffive#1}%
6596     \fi
6597 }

```

```

6598 </package>
6599 <*check>
6600 \checklatex
6601 \checkcommand\def\@setref#1#2#3{%
6602   \ifx#1\relax
6603     \protect\G@refundefinedtrue
6604     \nfss@text{\reset@font\bfseries ??}%
6605     \@latex@warning{%
6606       Reference ‘#3’ on page \thepage\space undefined%
6607     }%
6608   \else
6609     \expandafter#2#1\null
6610   \fi
6611 }
6612 </check>
6613 <*package>

```

Now some extended referencing. `\ref*` and `\pageref*` are not linked, and `\autoref` prefixes with a tag based on the type.

```

6614 \def\HyRef@StarSetRef#1{%
6615   \begingroup
6616   \Hy@safe@activestrue
6617   \edef\x{#1}%
6618   \@onelevel@sanitize\x
6619   \edef\x{\endgroup
6620     \noexpand\HyRef@@StarSetRef
6621     \expandafter\noexpand\csname r@\x\endcsname{\x}%
6622   }%
6623   \x
6624 }
6625 \def\HyRef@@StarSetRef#1#2#3{%
6626   \ifx#1\@undefined
6627     \let#1\relax
6628   \fi
6629   \real@setref#1#3{#2}%
6630 }
6631 \def\@refstar#1{%
6632   \HyRef@StarSetRef{#1}\@firstoffive
6633 }
6634 \def\@pagerefstar#1{%
6635   \HyRef@StarSetRef{#1}\@secondoffive
6636 }
6637 \AtBeginDocument{%
6638   \@ifpackageloaded{varioref}{%
6639     \def\@Refstar#1{%
6640       \HyRef@StarSetRef{#1}\HyRef@MakeUppercaseFirstOfFive
6641     }%
6642     \def\HyRef@MakeUppercaseFirstOfFive#1#2#3#4#5{%
6643       \MakeUppercase#1%
6644     }%
6645     \DeclareRobustCommand*\{ \Ref }{%
6646       \@ifstar\@Refstar\HyRef@Ref
6647     }%
6648     \def\HyRef@Ref#1{%
6649       \hyperref[#{#1}]{\Ref*{#1}}%
6650     }%
6651     \def\Vr@f#1{%
6652       \leavevmode\unskip\vref@space

```

```

6653     \hyperref[ $\{ \#1 \}]{\%$ 
6654         \Ref* $\{ \#1 \}$ %
6655         \let\vref@space\nobreakspace
6656         \@vpageref[\unskip] $\{ \#1 \}$ %
6657     }%
6658 }%
6659 \def\vr@f#1{%
6660     \leavevmode\unskip\vref@space
6661     \begingroup
6662         \let\T@pageref\@pagerefstar
6663         \hyperref[ $\{ \#1 \}]{\%$ 
6664             \ref* $\{ \#1 \}$ %
6665             \vpageref[\unskip] $\{ \#1 \}$ %
6666         }%
6667     \endgroup
6668 }%
6669 }{}%
6670 }
6671 \DeclareRobustCommand*\autopageref{%
6672     \@ifstar{%
6673         \HyRef@autopagerefname\pageref*%
6674     }\HyRef@autopageref
6675 }
6676 \def\HyRef@autopageref#1{%
6677     \hyperref[ $\{ \#1 \}]{\HyRef@autopagerefname\pageref* $\{ \#1 \}$ %
6678 }
6679 \def\HyRef@autopagerefname{%
6680     \@ifundefined{pageautorefname}{%
6681         \@ifundefined{pagename}{%
6682             \Hy@Warning{No autoref name for 'page'}%
6683         }{%
6684             \pagename\nobreakspace
6685         }%
6686     }{%
6687         \pageautorefname\nobreakspace
6688     }%
6689 }
6690 \DeclareRobustCommand*\autoref{%
6691     \@ifstar{\HyRef@autoref@gobbletwo}{\HyRef@autoref\hyper@link}%
6692 }
6693 \def\HyRef@autoref#1#2{%
6694     \begingroup
6695         \Hy@safe@activetrue
6696         \expandafter\HyRef@autosetref\csname r@#2\endcsname $\{ \#2 \}$  $\{ \#1 \}$ %
6697     \endgroup
6698 }
6699 \def\HyRef@autosetref#1#2#3{% link command, csname, refname
6700     \HyRef@ShowKeysRef $\{ \#2 \}$ %
6701     \ifcase 0\ifx#1\relax 1\fi\ifx#1\Hy@varioref@undefined 1\fi\relax
6702         \edef\HyRef@thisref{%
6703             \expandafter\@fourthoffive#1\@empty\@empty\@empty
6704         }%
6705         \expandafter\HyRef@testreftype\HyRef@thisref.\.%
6706         \Hy@safe@activesfalse
6707         #3{%
6708             \expandafter\@fifthoffive#1\@empty\@empty\@empty
6709         }{%$ 
```

```

6710     \expandafter\@fourthoffive#1\@empty\@empty\@empty
6711   }{%
6712     \HyRef@currentHtag
6713     \expandafter\@firstoffive#1\@empty\@empty\@empty
6714     \null
6715   }%
6716 \else
6717   \protect\G@refundefinedtrue
6718   \nfss@text{\reset@font\bfseries ??}%
6719   \@latex@warning{%
6720     Reference ‘#2’ on page \thepage\space undefined%
6721   }%
6722 \fi
6723 }
6724 \def\HyRef@testreftype#1.#2\\{%
6725   \@ifundefined{#1autorefname}{%
6726     \@ifundefined{#1name}{%
6727       \HyRef@StripStar#1\\*\\@nil{#1}%
6728       \@ifundefined{\HyRef@name autorefname}{%
6729         \@ifundefined{\HyRef@name name}{%
6730           \def\HyRef@currentHtag{%
6731             \Hy@Warning{No autoref name for ‘#1’}%
6732           }{%
6733             \edef\HyRef@currentHtag{%
6734               \expandafter\noexpand\csname\HyRef@name name\endcsname
6735               \noexpand~%
6736             }%
6737           }%
6738         }{%
6739           \edef\HyRef@currentHtag{%
6740             \expandafter\noexpand\csname\HyRef@name autorefname\endcsname
6741             \noexpand~%
6742           }%
6743         }%
6744       }{%
6745         \edef\HyRef@currentHtag{%
6746           \expandafter\noexpand\csname#1name\endcsname
6747           \noexpand~%
6748         }%
6749       }%
6750     }{%
6751       \edef\HyRef@currentHtag{%
6752         \expandafter\noexpand\csname#1autorefname\endcsname
6753         \noexpand~%
6754       }%
6755     }%
6756 }
6757 \def\HyRef@StripStar#1*\\#2\@nil#3{%
6758   \def\HyRef@name{#2}%
6759   \ifx\HyRef@name\HyRef@CaseStar
6760     \def\HyRef@name{#1}%
6761   \else
6762     \def\HyRef@name{#3}%
6763   \fi
6764 }
6765 \def\HyRef@CaseStar{*\\}
6766 \def\HyRef@currentHtag{}

```

Support for package showkeys.

`\HyRef@ShowKeysRef`

```
6767 \let\HyRef@ShowKeysRef\@gobble
6768 \def\HyRef@ShowKeysInit{%
6769   \begingroup\expandafter\expandafter\expandafter\endgroup
6770   \expandafter\ifx\csname SK@@label\endcsname\relax
6771   \else
6772     \ifx\SK@ref\@empty
6773     \else
6774       \def\HyRef@ShowKeysRef{%
6775         \SK@\SK@@ref
6776       }%
6777     \fi
6778   \fi
6779 }
6780 \@ifpackageloaded{showkeys}{%
6781   \HyRef@ShowKeysInit
6782 }{%
6783   \AtBeginDocument{%
6784     \@ifpackageloaded{showkeys}{%
6785       \HyRef@ShowKeysInit
6786     }{%
6787     }%
6788 }
```

Defaults for the names that `\autoref` uses.

```
6789 \providecommand*\AMSautorefname{\equationautorefname}
6790 \providecommand*\Hfootnoteautorefname{\footnoteautorefname}
6791 \providecommand*\Itemautorefname{\itemautorefname}
6792 \providecommand*\itemautorefname{item}
6793 \providecommand*\equationautorefname{Equation}
6794 \providecommand*\footnoteautorefname{footnote}
6795 \providecommand*\itemautorefname{item}
6796 \providecommand*\figureautorefname{Figure}
6797 \providecommand*\tableautorefname{Table}
6798 \providecommand*\partautorefname{Part}
6799 \providecommand*\appendixautorefname{Appendix}
6800 \providecommand*\chapterautorefname{chapter}
6801 \providecommand*\sectionautorefname{section}
6802 \providecommand*\subsectionautorefname{subsection}
6803 \providecommand*\subsubsectionautorefname{subsubsection}
6804 \providecommand*\paragraphautorefname{paragraph}
6805 \providecommand*\subparagraphautorefname{subparagraph}
6806 \providecommand*\FancyVerbLineautorefname{line}
6807 \providecommand*\theoremautorefname{Theorem}
6808 \providecommand*\pageautorefname{page}
6809 \endpackage
```

46 Configuration files

46.1 PS/PDF strings

Some drivers write PS or PDF strings. These strings are delimited by parentheses, therefore a lonely unmatched parenthesis must be avoided to avoid PS or PDF syntax errors. Also the backslash character itself has to be protected.

`\Hy@pstringdef` Therefore such strings should be passed through `\Hy@pstringdef`. The first argument holds a macro for the result, the second argument is the string that needs protecting. Since version 1.30.0 pdf_T_EX offers `\pdfescapestring`.

```

6810 <*pdfTeX | dvipdfm | vTeX | pdfmarkbase | dviwindo>
6811 \RequirePackage{pdfTeXcmds}[2007/11/11]
6812 \begingroup\expandafter\expandafter\expandafter\endgroup
6813 \expandafter\ifx\csname pdf@escapestring\endcsname\relax
6814   \begingroup
6815     \catcode'\| =0 %
6816     \@makeother\| %
6817     |@firstofone{|endgroup
6818     |def|Hy@pstringdef#1#2{%
6819       |begingroup
6820         |edef~{|string~}%
6821         |xdef|Hy@gtemp{#2}%
6822       |endgroup
6823       |let#1|Hy@gtemp
6824       |@onelevel@sanitize#1%
6825       |edef#1{|expandafter|Hy@ExchangeBackslash#1|@nil}%
6826       |edef#1{|expandafter|Hy@ExchangeLeftParenthesis#1(|@nil}%
6827       |edef#1{|expandafter|Hy@ExchangeRightParenthesis#1)|@nil}%
6828     }%
6829     |def|Hy@ExchangeBackslash#1\#2|@nil{%
6830       #1%
6831       |ifx|\#2|\%%
6832       |else
6833         \\\%
6834         |Hy@ReturnAfterFi{%
6835           |Hy@ExchangeBackslash#2|@nil
6836         }%
6837       |fi
6838     }%
6839   }%
6840   \def\Hy@ExchangeLeftParenthesis#1(#2\@nil{%
6841     #1%
6842     \ifx\#2\%%
6843     \else
6844       \@backslashchar(%
6845       \Hy@ReturnAfterFi{%
6846         \Hy@ExchangeLeftParenthesis#2\@nil
6847       }%
6848     \fi
6849   }%
6850   \def\Hy@ExchangeRightParenthesis#1)#2\@nil{%
6851     #1%
6852     \ifx\#2\%%
6853     \else
6854       \@backslashchar)%
6855       \Hy@ReturnAfterFi{%
6856         \Hy@ExchangeRightParenthesis#2\@nil
6857       }%
6858     \fi
6859   }%
6860 \else
6861   \def\Hy@pstringdef#1#2{%
6862     \begingroup
6863     \edef~{\string~}%

```



```

6864 \xdef\Hy@gtemp{\pdf@escapestring{#2}}%
6865 \endgroup
6866 \let#1\Hy@gtemp
6867 }%
6868 \fi
6869 </pdfTeX | dvipdfm | vtex | pdfmarkbase | dviwindo>

```

46.2 pdfTeX

```

6870 <*pdfTeX>
6871 \providecommand*\XR@ext}{pdf}
6872 \Hy@setbreaklinks{true}

```

This driver is for Han The Thanh's T_EX variant which produces PDF directly. This has new primitives to do PDF things, which usually translate almost directly to PDF code, so there is a lot of flexibility which we do not at present harness.

Set PDF version if requested by option `pdfversion`.

- pdfT_EX 1.10a, 2003-01-16: `\pdfoptionpdfminorversion`
- pdfT_EX 1.30, 2005-08-08: `\pdfminorversion`

```

6873 \let\Hy@pdfminorversion\relax
6874 \begingroup\expandafter\expandafter\expandafter\endgroup
6875 \expandafter\ifx\csname pdfminorversion\endcsname\relax
6876 \begingroup\expandafter\expandafter\expandafter\endgroup
6877 \expandafter\ifx\csname pdfoptionpdfminorversion\endcsname\relax
6878 \else
6879 \def\Hy@pdfminorversion{\pdfoptionpdfminorversion}%
6880 \fi
6881 \else
6882 \def\Hy@pdfminorversion{\pdfminorversion}%
6883 \fi
6884 \@ifundefined{Hy@pdfminorversion}{%
6885 \PackageInfo{hyperref}{%
6886 PDF version is not set, because pdfTeX is too old (<1.10a)%
6887 }%
6888 }{%
6889 \ifHy@ocgcolorlinks
6890 \ifnum\Hy@pdfminorversion<5 %
6891 \setkeys{Hyp}{pdfversion=1.5}%
6892 \fi
6893 \fi
6894 \ifHy@setpdfversion
6895 \ifnum\Hy@pdfminorversion=\Hy@pdfversion\relax
6896 \else
6897 \Hy@pdfminorversion=\Hy@pdfversion\relax
6898 \fi
6899 \PackageInfo{hyperref}{%
6900 \expandafter\string\Hy@pdfminorversion
6901 :=\number\Hy@pdfversion\space
6902 }%
6903 \fi
6904 \edef\Hy@pdfversion{\number\Hy@pdfminorversion}%
6905 }
6906 \Hy@DisableOption{pdfversion}%
6907 \ifHy@ocgcolorlinks
6908 \immediate\pdfobj{%
6909 <<%

```

```

6910      /Type/OCG%
6911      /Name(View)%
6912      /Usage<<%
6913          /Print<<%
6914              /PrintState/OFF%
6915          >>%
6916      /View<<%
6917          /ViewState/ON%
6918      >>%
6919  >>%
6920  >>%
6921 }%
6922  \edef\OBJ@OCG@view{\the\pdflastobj\space 0 R}%
6923  \immediate\pdfobj{%
6924      <<%
6925          /Type/OCG%
6926          /Name(Print)%
6927          /Usage<<%
6928              /Print<<%
6929                  /PrintState/ON%
6930              >>%
6931              /View<<%
6932                  /ViewState/OFF%
6933              >>%
6934          >>%
6935      >>%
6936  }%
6937  \edef\OBJ@OCG@print{\the\pdflastobj\space 0 R}%
6938  \immediate\pdfobj{%
6939      [%
6940          \OBJ@OCG@view\space\OBJ@OCG@print
6941      ]%
6942  }%
6943  \edef\OBJ@OCGs{\the\pdflastobj\space 0 R}%
6944  \pdfcatalog{%
6945      /OCProperties<<%
6946          /OCGs \OBJ@OCGs
6947      /D<<%
6948          /OFF[\OBJ@OCG@print]%
6949          /AS[%
6950              <<%
6951                  /Event/View%
6952                  /OCGs \OBJ@OCGs
6953                  /Category[/View]%
6954              >>%
6955              <<%
6956                  /Event/Print%
6957                  /OCGs \OBJ@OCGs
6958                  /Category[/Print]%
6959              >>%
6960              <<%
6961                  /Event/Export%
6962                  /OCGs \OBJ@OCGs
6963                  /Category[/Print]%
6964              >>%
6965          ]%
6966      >>%

```

```

6967     >>%
6968 }%
6969 \begingroup
6970   \edef\x{\endgroup
6971     \pdfpageresources{%
6972       /Properties<<%
6973       /OCView \OBJ@OCG@view
6974       /OCPrint \OBJ@OCG@print
6975     >>%
6976   }%
6977 }%
6978 \x
6979 \AtBeginDocument{%
6980   \def\Hy@colorlink#1{%
6981     \begingroup
6982     \ifHy@ocgcolorlinks
6983       \def\Hy@ocgcolor{#1}%
6984       \setbox0=\color@hbox
6985     \else
6986       \HyColor@UseColor#1%
6987     \fi
6988   }%
6989   \def\Hy@endcolorlink{%
6990     \ifHy@ocgcolorlinks
6991       \color@endbox
6992       \mbox{%
6993         \pdfliteral page{/OC/OCPrint BDC}%
6994         \rlap{\copy0}%
6995         \pdfliteral page{EMC/OC/OCView BDC}%
6996         \begingroup
6997           \expandafter\HyColor@UseColor\Hy@ocgcolor
6998         \box0 %
6999       \endgroup
7000       \pdfliteral page{EMC}%
7001     }%
7002   \fi
7003 \endgroup
7004 }%
7005 }%
7006 \else
7007   \Hy@DisableOption{ocgcolorlinks}%
7008 \fi

```

First, allow for some changes and additions to pdftex syntax:

```

7009 \def\setpdflinkmargin#1{\pdflinkmargin#1}
7010 \ifx\pdfstartlink\@undefined% less than version 14
7011   \let\pdfstartlink\pdfannotlink
7012   \let\pdflinkmargin\@tempdima
7013   \let\pdfxform\pdfform
7014   \let\pdflastxform\pdflastform
7015   \let\pdfrefxform\pdfrefform
7016 \else
7017   \pdflinkmargin1pt %
7018 \fi

```

First set up the default linking

```
7019 \providecommand*\@pdfview{XYZ}
```

First define the anchors:

```

7020 \def\new@pdflink#1{%
7021   \ifHy@verbose
7022     \typeout{pdftex: define anchor at line \the\inputlineno: #1}%
7023   \fi
7024   \Hy@SaveLastskip
7025   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
7026   \Hy@DestName\Hy@pstringDest\@pdfview
7027   \Hy@RestoreLastskip
7028 }
7029 \let\pdf@endanchor\@empty

```

\Hy@DestName Wrap the call of \pdfdest name in \Hy@DestName. Then it can easier be caught by package hypdestopt.

```

7030 \def\Hy@DestName#1#2{%
7031   \pdfdest name{#1}#2\relax
7032 }

```

Now the links; the interesting part here is the set of attributes which define how the link looks. We probably want to add a border and color it, but there are other choices. This directly translates to PDF code, so consult the manual for how to change this. We will add an interface at some point.

```

7033 \providecommand*\@pdfborder{0 0 1}
7034 \providecommand*\@pdfborderstyle{}
7035 \def\Hy@undefinedname{UNDEFINED}
7036 \def\find@pdflink#1#2{%
7037   \leavevmode
7038   \protected@edef\Hy@testname{#2}%
7039   \ifx\Hy@testname\@empty
7040     \Hy@Warning{%
7041       Empty destination name,\MessageBreak
7042       using '\Hy@undefinedname'%
7043     }%
7044     \let\Hy@testname\Hy@undefinedname
7045   \else
7046     \Hy@pstringdef\Hy@testname{%
7047       \expandafter\HyperDestNameFilter\expandafter{\Hy@testname}%
7048     }%
7049   \fi
7050   \Hy@StartlinkName{%
7051     \ifHy@pdfa /F 4\fi
7052     \Hy@setpdfborder
7053     \ifx\@pdfhighlight\@empty
7054       \else
7055         /H\@pdfhighlight
7056       \fi
7057     \ifx\CurrentBorderColor\relax
7058       \else
7059         /C[\CurrentBorderColor]%
7060       \fi
7061   }\Hy@testname
7062   \expandafter\Hy@colorlink\csname @#1color\endcsname
7063 }
7064 \def\Hy@StartlinkName#1#2{%
7065   \pdfstartlink attr{#1}goto name{#2}\relax
7066 }
7067 \def\close@pdflink{\Hy@endcolorlink\pdfendlink}
7068 \def\hyper@anchor#1{\new@pdflink{#1}\anchor@spot\pdf@endanchor}

```

```

7069 \def\hyper@anchorstart#1{\new@pdfink{#1}\Hy@activeanchortrue}
7070 \def\hyper@anchorend{\pdf@endanchor\Hy@activeanchorfalse}
7071 \def\hyper@linkstart#1#2{%
7072   \@ifundefined{#@#1bordercolor}{%
7073     \let\CurrentBorderColor\relax
7074   }{%
7075     \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
7076   }%
7077   \find@pdfink{#1}{#2}%
7078 }
7079 \def\hyper@linkend{\close@pdfink}
7080 \def\hyper@link#1#2#3{%
7081   \@ifundefined{#@#1bordercolor}{%
7082     \let\CurrentBorderColor\relax
7083   }{%
7084     \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
7085   }%
7086   \find@pdfink{#1}{#2}#3%
7087   \close@pdfink
7088 }
7089 \let\CurrentBorderColor\@linkbordercolor
7090 \def\hyper@linkurl#1#2{%
7091   \begingroup
7092     \Hy@pstringdef\Hy@pstringURI{#2}%
7093     \hyper@chars
7094     \leavevmode
7095     \pdfstartlink
7096       attr{%
7097         \Hy@setpdfborder
7098         \ifx\@pdfhighlight\@empty
7099           \else
7100             /H\@pdfhighlight
7101           \fi
7102         \ifx\@urlbordercolor\relax
7103           \else
7104             /C[\@urlbordercolor]%
7105           \fi
7106       }%
7107     user{%
7108       /Subtype/Link%
7109       \ifHy@pdfa /F 4\fi
7110       /A<<%
7111         /Type/Action%
7112         /S/URI%
7113         /URI(\Hy@pstringURI)%
7114       >>%
7115     }%
7116     \relax
7117     \Hy@colorlink\@urlcolor#1%
7118     \close@pdfink
7119   \endgroup
7120 }
7121 \def\hyper@linkfile#1#2#3{% anchor text, filename, linkname
7122   \begingroup
7123     \Hy@pstringdef\Hy@pstringF{#2}%
7124     \Hy@pstringdef\Hy@pstringD{#3}%
7125     \leavevmode

```

```

7126 \pdfstartlink
7127   attr{%
7128     \Hy@setpdfborder
7129     \ifx\@pdfhighlight\@empty
7130     \else
7131       /H\@pdfhighlight
7132     \fi
7133     \ifx\@filebordercolor\relax
7134     \else
7135       /C[\@filebordercolor]%
7136     \fi
7137   }%
7138   user {%
7139     /Subtype/Link%
7140     \ifHy@pdfa /F 4\fi
7141     /A<<%
7142     /F(\Hy@pstringF)%
7143     /S/GoToR%
7144     \Hy@SetNewWindow

```

If #3 is empty, page 0; if its a number, Page number, otherwise a named destination.

```

\afterassignment\xxx\count@=0\foo!%

```

```

\def\xxx#1!{%
  \ifx\xxx#1\xxx
    foo was an integer
  \else
    it wasnt
  \fi}

```

```

7145     \ifx\#3\%
7146     /D[0 \@pdfstartview]%
7147   \else
7148     /D(\Hy@pstringD)%
7149   \fi
7150   >>%
7151 }%
7152 \relax
7153 \Hy@colorlink\@filecolor#1%
7154 \close@pdflink
7155 \endgroup
7156 }
7157 \def\@hyper@launch run:#1\#2#3{% filename, anchor text linkname
7158 \begingroup
7159   \Hy@pstringdef\Hy@pstringF{#1}%
7160   \Hy@pstringdef\Hy@pstringP{#3}%
7161   \leavevmode
7162   \pdfstartlink
7163   attr{%
7164     \Hy@setpdfborder
7165     \ifx\@pdfhighlight\@empty
7166     \else
7167       /H\@pdfhighlight
7168     \fi
7169     \ifx\@runbordercolor\relax
7170     \else
7171       /C[\@runbordercolor]%

```

```

7172     \fi
7173   }%
7174   user {%
7175     /Subtype/Link%
7176     \ifHy@pdfa /F 4\fi
7177     /A<<%
7178     /F(\Hy@pstringF)%
7179     /S/Launch%
7180     \Hy@SetNewWindow
7181     \ifx\#3\%
7182     \else
7183       /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
7184     \fi
7185   >>%
7186   }%
7187   \relax
7188   \Hy@colorlink\@runcolor#2%
7189   \close@pdflink
7190 \endgroup
7191 }

```

\@pdfproducer

```

7192 \ifx\@pdfproducer\relax
7193   \beginngroup\expandafter\expandafter\expandafter\endgroup
7194   \expandafter\ifx\csname luatexversion\endcsname\relax
7195     \def\@pdfproducer{pdfTeX}%
7196     \ifx\eTeXversion\@undefined
7197     \else
7198       \ifx\eTeXversion\relax
7199       \else
7200         \ifnum\eTeXversion>0 %
7201           \def\@pdfproducer{pdfTeX}%
7202         \fi
7203       \fi
7204     \fi
7205     \ifx\pdfTeXversion\@undefined
7206     \else
7207       \ifnum\pdfTeXversion<100 %
7208         \edef\@pdfproducer{%
7209           \@pdfproducer
7210           \the\pdfTeXversion.\pdfTeXrevision
7211         }%
7212       \else
7213         \ifnum\pdfTeXversion<130 %
7214         \edef\@pdfproducer{%
7215           \@pdfproducer-%
7216           \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
7217           \expandafter\@cdr\the\pdfTeXversion\@empty\@nil
7218           \pdfTeXrevision
7219         }%
7220       \else
7221         \ifnum\pdfTeXversion<140 %
7222         \else
7223           \def\@pdfproducer{pdfTeX}%
7224         \fi
7225       \edef\@pdfproducer{%
7226         \@pdfproducer-%

```

```

7227         \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
7228         \expandafter\@cdr\the\pdfTeXversion\@empty\@nil.%
7229         \pdfTeXrevision
7230     }%
7231     \fi
7232 \fi
7233 \fi
7234 \else
7235     \begingroup
7236     \count@=\luaTeXversion
7237     \divide\count@ by 100 %
7238     \edef\x{\the\count@}%
7239     \count@=-\x\relax
7240     \multiply\count@ by 100 %
7241     \advance\count@ by \luaTeXversion
7242     \edef\x{\endgroup
7243         \def\noexpand\@pdfproducer{%
7244             LuaTeX-\x.\the\count@.\luaTeXrevision
7245         }%
7246     }%
7247 \x
7248 \fi
7249 \fi

```

\PDF@SetupDox

```

7250 \def\PDF@SetupDoc{%
7251     \ifx\@pdfpagescrop\@empty
7252     \else
7253         \edef\process@me{%
7254             \pdfpagesattr={%
7255                 /CropBox[\@pdfpagescrop]%
7256                 \expandafter\ifx\expandafter\\\the\pdfpagesattr\\%
7257                 \else
7258                     ^^J\the\pdfpagesattr
7259                 \fi
7260             }%
7261         }%
7262         \process@me
7263     \fi
7264     \Hy@pstringdef\Hy@pstringB{\@baseurl}%
7265     \pdfcatalog{%
7266         /PageMode/\@pdfpagemode
7267         \ifx\@baseurl\@empty
7268         \else
7269             /URI<</Base(\Hy@pstringB)>>%
7270         \fi
7271     }%
7272     \ifx\@pdfstartpage\@empty
7273     \else
7274         \ifx\@pdfstartview\@empty
7275         \else
7276             openaction goto page\@pdfstartpage{\@pdfstartview}%
7277         \fi
7278     \fi
7279     \edef\Hy@temp{%
7280         \ifHy@toolbar\else /HideToolbar true\fi
7281         \ifHy@menubar\else /HideMenubar true\fi

```



```

7282 \ifHy@windowui\else /HideWindowUI true\fi
7283 \ifHy@fitwindow /FitWindow true\fi
7284 \ifHy@centerwindow /CenterWindow true\fi
7285 \ifHy@displaydoctitle /DisplayDocTitle true\fi
7286 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
7287 \Hy@UseNameKey{Direction}\@pdfdirection
7288 \Hy@UseNameKey{ViewArea}\@pdfviewarea
7289 \Hy@UseNameKey{ViewClip}\@pdfviewclip
7290 \Hy@UseNameKey{PrintArea}\@pdfprintarea
7291 \Hy@UseNameKey{PrintClip}\@pdfprintclip
7292 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
7293 \Hy@UseNameKey{Duplex}\@pdfduplex
7294 \ifx\@pdfpicktraybypdfsize\@empty
7295 \else
7296 /PickTrayByPDFSize \@pdfpicktraybypdfsize
7297 \fi
7298 \ifx\@pdfprintpagerange\@empty
7299 \else
7300 /PrintPageRange[\@pdfprintpagerange]%
7301 \fi
7302 \ifx\@pdfnumcopies\@empty
7303 \else
7304 /NumCopies \@pdfnumcopies
7305 \fi
7306 }%
7307 \pdfcatalog{%
7308 \ifx\Hy@temp\@empty
7309 \else
7310 /ViewerPreferences<<\Hy@temp>>%
7311 \fi
7312 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
7313 \ifx\@pdflang\@empty
7314 \else
7315 /Lang(\@pdflang)%
7316 \fi
7317 }%
7318 }

```

\PDF@FinishDoc

```

7319 \def\PDF@FinishDoc{%
7320 \Hy@UseMaketitleInfos
7321 \pdfinfo{%
7322 /Author(\@pdfauthor)%
7323 /Title(\@pdftitle)%
7324 /Subject(\@pdfsubject)%
7325 /Creator(\@pdfcreator)%
7326 \ifx\@pdfcreationdate\@empty
7327 \else
7328 /CreationDate(\@pdfcreationdate)%
7329 \fi
7330 \ifx\@pdfmoddate\@empty
7331 \else
7332 /ModDate(\@pdfmoddate)%
7333 \fi
7334 \ifx\@pdfproducer\relax
7335 \else
7336 /Producer(\@pdfproducer)%

```

```

7337 \fi
7338 /Keywords(\@pdfkeywords)%
7339 }%
7340 \Hy@DisableOption{pdfauthor}%
7341 \Hy@DisableOption{pdftitle}%
7342 \Hy@DisableOption{pdfsubject}%
7343 \Hy@DisableOption{pdfcreator}%
7344 \Hy@DisableOption{pdfcreationdate}%
7345 \Hy@DisableOption{pdfmoddate}%
7346 \Hy@DisableOption{pdfproducer}%
7347 \Hy@DisableOption{pdfkeywords}%
7348 }

```

`\hyper@pagetransition` `\@pdfpagetransition` is initialized with `\relax`. So it indicates, if option `pdfpagetransition` is used. First previous `/Trans` entries are removed. If a new `/Trans` key exists, it is appended to `\pdfpageattr`.

```

7349 \def\hyper@pagetransition{%
7350 \ifx\@pdfpagetransition\relax
7351 \else
7352 \expandafter\Hy@RemoveTransPageAttr
7353 \the\pdfpageattr^^J/Trans{}}>>\END
7354 \ifx\@pdfpagetransition\@empty
7355 \else
7356 \edef\@processme{%
7357 \global\pdfpageattr{%
7358 \the\pdfpageattr
7359 ^^J/Trans << /S /\@pdfpagetransition\space >>%
7360 }%
7361 }%
7362 \@processme
7363 \fi
7364 \fi
7365 }

```

`\Hy@RemoveTransPageAttr` Macro `\Hy@RemoveTransPageAttr` removes a `/Trans` entry from `\pdfpageattr`. It is called with the end marker `^^J/Trans{}}>>\END`. The trick is the empty group that does not appear in legal `\pdfpageattr` code. It appears in argument #2 and shows, whether the parameter text catches a really `/Trans` object or the end marker.

```

7366 \gdef\Hy@RemoveTransPageAttr#1^^J/Trans#2#3>>#4\END{%
7367 \ifx\#2\%
7368 \global\pdfpageattr{#1}%
7369 \else
7370 \Hy@RemoveTransPageAttr#1#4\END
7371 \fi
7372 }

```

`\hyper@pageduration` `\@pdfpageduration` is initialized with `\relax`. So it indicates, if option `pdfpageduration` is used. First previous `/Dur` entries are removed. If a new `/Dur` key exists, it is appended to `\pdfpageattr`.

```

7373 \def\hyper@pageduration{%
7374 \ifx\@pdfpageduration\relax
7375 \else
7376 \expandafter\Hy@RemoveDurPageAttr\the\pdfpageattr^^J/Dur{} \END
7377 \ifx\@pdfpageduration\@empty
7378 \else
7379 \edef\@processme{%
7380 \global\pdfpageattr{%

```

```

7381         \the\pdfpageattr
7382         ^^J/Dur \@pdfpageduration\space
7383     }%
7384 }%
7385 \@processme
7386 \fi
7387 \fi
7388 }

```

\Hy@RemoveDurPageAttr Macro `\Hy@RemoveDurPageAttr` removes a `/Dur` entry from `\pdfpageattr`. It is called with the end marker `^^J/Dur{} \END`. The trick is the empty group that does not appear in legal `\pdfpageattr` code. It appears in argument #2 and shows, whether the parameter text catches a really `/Dur` object or the end marker.

```

7389 \gdef\Hy@RemoveDurPageAttr#1^^J/Dur#2#3 #4\END{%
7390     \ifx\#2\%
7391         \global\pdfpageattr{#1}%
7392     \else
7393         \Hy@RemoveDurPageAttr#1#4\END
7394     \fi
7395 }

```

\hyper@pagehidden The boolean value of the key `/Hid` is stored in switch `\ifHy@pdfpagehidden`. First previous `/Hid` entries are removed, then the new one is appended, if the value is true (the PDF default is false).

```

7396 \def\hyper@pagehidden{%
7397     \ifHy@useHidKey
7398         \expandafter\Hy@RemoveHidPageAttr\the\pdfpageattr^^J/Hid{} \END
7399     \ifHy@pdfpagehidden
7400         \edef\@processme{%
7401             \global\pdfpageattr{%
7402                 \the\pdfpageattr
7403                 ^^J/Hid true % SPACE
7404             }%
7405         }%
7406         \@processme
7407     \fi
7408 \fi
7409 }

```

\Hy@RemoveHidPageAttr Macro `\Hy@RemoveHidPageAttr` removes a `/Hid` entry from `\pdfpageattr`. It is called with the end marker `^^J/Hid{} \END`. The trick is the empty group that does not appear in legal `\pdfpageattr` code. It appears in argument #2 and shows, whether the parameter text catches a really `/Hid` object or the end marker.

```

7410 \gdef\Hy@RemoveHidPageAttr#1^^J/Hid#2#3 #4\END{%
7411     \ifx\#2\%
7412         \global\pdfpageattr{#1}%
7413     \else
7414         \Hy@RemoveHidPageAttr#1#4\END
7415     \fi
7416 }

7417 \g@addto@macro\Hy@EveryPageHook{%
7418     \hyper@pagetransition
7419     \hyper@pageduration
7420     \hyper@pagehidden
7421 }

```

```

7422 \AtBeginDocument{%
7423   \ifHy@setpagesize
7424     \expandafter\@firstofone
7425   \else
7426     \expandafter\@gobble
7427   \fi
7428   {%
7429     \@ifclassloaded{seminar}{%
7430       \setlength{\pdfhorigin}{1truein}%
7431       \setlength{\pdfvorigin}{1truein}%
7432       \ifportrait
7433         \ifdim\paperwidth=\z@
7434         \else
7435           \setlength{\pdfpagewidth}{\strip@pt\paperwidth truept}%
7436         \fi
7437         \ifdim\paperheight=\z@
7438         \else
7439           \setlength{\pdfpageheight}{\strip@pt\paperheight truept}%
7440         \fi
7441       \else
7442         \ifdim\paperheight=\z@
7443         \else
7444           \setlength{\pdfpagewidth}{\strip@pt\paperheight truept}%
7445         \fi
7446         \ifdim\paperwidth=\z@
7447         \else
7448           \setlength{\pdfpageheight}{\strip@pt\paperwidth truept}%
7449         \fi
7450       \fi
7451     }{%
7452       \@ifundefined{stockwidth}{%
7453         \ifdim\paperwidth=\z@
7454         \else
7455           \setlength{\pdfpagewidth}{\paperwidth}%
7456         \fi
7457         \ifdim\paperheight=\z@
7458         \else
7459           \setlength{\pdfpageheight}{\paperheight}%
7460         \fi
7461       }{%
7462         \ifdim\stockwidth=\z@
7463         \else
7464           \setlength{\pdfpagewidth}{\stockwidth}%
7465         \fi
7466         \ifdim\stockheight=\z@
7467         \else
7468           \setlength{\pdfpageheight}{\stockheight}%
7469         \fi
7470       }%
7471     }%
7472   }%
7473   \Hy@DisableOption{setpagesize}%
7474 }
7475 \def\Acrobatmenu#1#2{%
7476   \Hy@Acrobatmenu{#1}{#2}{%
7477     \pdfstartlink
7478     attr{%

```

```

7479      \Hy@setpdfborder
7480      \ifx\@pdfhighlight\@empty
7481      \else
7482      /H\@pdfhighlight
7483      \fi
7484      \ifx\@menubordercolor\relax
7485      \else
7486      /C[\@menubordercolor]%
7487      \fi
7488    }%
7489    user{%
7490      /Subtype/Link%
7491      \ifHy@pdfa /F 4\fi
7492      /A<<%
7493      /S/Named/N/#1%
7494      >>%
7495    }%
7496    \relax
7497    \Hy@colorlink\@menucolor#2%
7498    \close@pdflink
7499  }%
7500 }

```

46.2.1 Fix for problem with different nesting levels

\AtBeginShipoutFirst adds an additional box layer around the first output page. This disturbs pdfTeX's low level link commands \pdfstartlink and \pdfendlink, if a link is broken across the first and second output page.

The problem could be fixed by replacing \AtBeginShipoutFirst, because the box layer is not necessary for pdfTeX— no \specials need to be inserted. However it's easier to add an additional box level for the pages after the first one. Also \AtBeginShipoutFirst could be invoked independently from hyperref.

```

7501 \def\Hy@FixNotFirstPage{%
7502   \gdef\Hy@FixNotFirstPage{%
7503     \setbox\AtBeginShipoutBox=\hbox{%
7504       \copy\AtBeginShipoutBox
7505     }%
7506   }%
7507 }
7508 \AtBeginShipout{\Hy@FixNotFirstPage}
7509 </pdfTeX>

```

46.3 hypertext

The HyperTeX specification (this is borrowed from an article by Arthur Smith) says that conformant viewers/translators must recognize the following set of \special commands:

href: html:

name: html:

end: html:

image: html:

base_name: html:<base href = "href_string">

The *href*, *name* and *end* commands are used to do the basic hypertext operations of establishing links between sections of documents. The *image* command is intended (as with current html viewers) to place an image of arbitrary graphical format on the page in the current location. The *base_name* command is be used to communicate to the *dvi* viewer the full (URL) location of the current document so that files specified by relative URL's may be retrieved correctly.

The *href* and *name* commands must be paired with an *end* command later in the T_EX file — the T_EX commands between the two ends of a pair form an *anchor* in the document. In the case of an *href* command, the *anchor* is to be highlighted in the *dvi* viewer, and when clicked on will cause the scene to shift to the destination specified by *href_string*. The *anchor* associated with a name command represents a possible location to which other hypertext links may refer, either as local references (of the form *href*="#name_string" with the *name_string* identical to the one in the name command) or as part of a URL (of the form *URL*#*name_string*). Here *href_string* is a valid URL or local identifier, while *name_string* could be any string at all: the only caveat is that *'*' characters should be escaped with a backslash (\), and if it looks like a URL name it may cause problems.

```

7510 <*hypertext>
7511 \providecommand*{\XR@ext}{dvi}
7512 \def\PDF@FinishDoc{}
7513 \def\PDF@SetupDoc{%
7514   \ifx\@baseurl\@empty
7515   \else
7516     \special{html:<base href="\@baseurl">}%
7517   \fi
7518 }
7519 \def\hyper@anchor#1{%
7520   \Hy@SaveLastskip
7521   \begingroup
7522     \let\protect=\string
7523     \hyper@chars
7524     \special{html:<a name=%
7525       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
7526   \endgroup
7527   \Hy@activeanchortrue
7528   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
7529   \special{html:</a>}%
7530   \Hy@activeanchorfalse
7531   \Hy@RestoreLastskip
7532 }
7533 \def\hyper@anchorstart#1{%
7534   \Hy@SaveLastskip
7535   \begingroup
7536     \hyper@chars
7537     \special{html:<a name=%
7538       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
7539   \endgroup
7540   \Hy@activeanchortrue
7541 }
7542 \def\hyper@anchorend{%
7543   \special{html:</a>}%
7544   \Hy@activeanchorfalse
7545   \Hy@RestoreLastskip
7546 }
7547 \def\@urltype{url}
7548 \def\hyper@linkstart#1#2{%

```

```

7549 \expandafter\Hy@colorlink\cname @#1color\endcsname
7550 \def\Hy@tempa{#1}%
7551 \ifx\Hy@tempa\@urltype
7552   \special{html:<a href=\hyper@quote#2\hyper@quote>}%
7553 \else
7554   \begingroup
7555     \hyper@chars
7556     \special{html:<a href=%
7557       \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
7558   \endgroup
7559 \fi
7560 }
7561 \def\hyper@linkend{%
7562   \special{html:</a>}%
7563   \Hy@endcolorlink
7564 }
7565 \def\hyper@linkfile#1#2#3{%
7566   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\#3\\\else\##3\fi}%
7567 }
7568 \def\hyper@linkurl#1#2{%

```

If we want to raise up the final link `\special`, we need to get its height; ask me why \LaTeX constructs make this totally foul up, and make us revert to basic \TeX . I do not know.

```

7569 \leavevmode
7570 \ifHy@raiselinks
7571   \setbox\@tempboxa=\color@hbox #1\color@endbox
7572   \@linkdim\dp\@tempboxa
7573   \lower\@linkdim\hbox{%
7574     \hyper@chars
7575     \special{html:<a href=\hyper@quote#2\hyper@quote>}%
7576   }%
7577   \Hy@colorlink\@urlcolor#1%
7578   \@linkdim\ht\@tempboxa

```

Because of the interaction with the `dvihps` processor, we have to subtract a little from the height. This is not clean, or checked. Check with Mark Doyle about what gives here. It may not be needed with the new `dvips` (Jan 1997).

```

7579   \advance\@linkdim by -6.5\p@
7580   \raise\@linkdim\hbox{\special{html:</a>}}%
7581   \Hy@endcolorlink
7582 \else
7583   \begingroup
7584     \hyper@chars
7585     \special{html:<a href=\hyper@quote#2\hyper@quote>}%
7586     \Hy@colorlink\@urlcolor#1%
7587     \special{html:</a>}%
7588     \Hy@endcolorlink
7589   \endgroup
7590 \fi
7591 }

```

Very poor implementation of `\hyper@link` without considering #1.

```

7592 \def\hyper@link#1#2#3{%
7593   \hyper@linkurl{#3}{\#\HyperDestNameFilter{#2}}%
7594 }
7595 \def\hyper@image#1#2{%
7596   \begingroup

```

```

7597 \hyper@chars
7598 \special{html:<img src=\hyper@quote#1\hyper@quote>}}%
7599 \endgroup
7600 }
7601 </hypertex>
7602 <*dviwindo>

```

46.4 dviwindo

[This was developed by David Carlisle]. Within a file dviwindo hyperlinking is used, for external URL's a call to \wwwbrowser is made. (You can define this command before or after loading the hyperref package if the default `c:/netscape/netscape` is not suitable) Dviwindo could in fact handle external links to dvi files on the same machine without calling a web browser, but that would mean parsing the URL to recognise such, and this is currently not done.

This was more or less blindly copied from the hypertex cfg. For dviwindo, \LaTeX must specify the size of the active area for links. For some hooks this information is available but for some, the start and end of the link are specified separately in which case a fixed size area of 10000000sp wide by \baselineskip high is used.

```

7603 \providecommand*\XR@ext}{dvi}
7604 \providecommand*\wwwbrowser{c:\string\netscape\string\netscape}
7605 \def\hyper@anchor#1{%
7606   \Hy@SaveLastskip
7607   \begingroup
7608     \let\protect=\string
7609     \special{mark: #1}%
7610   \endgroup
7611   \Hy@activeanchortrue
7612   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
7613   \Hy@activeanchorfalse
7614   \Hy@RestoreLastskip
7615 }
7616 \def\hyper@anchorstart#1{%
7617   \Hy@SaveLastskip
7618   \special{mark: #1}%
7619   \Hy@activeanchortrue
7620 }
7621 \def\hyper@anchorend{%
7622   \Hy@activeanchorfalse
7623   \Hy@RestoreLastskip
7624 }
7625 \def\hyper@linkstart#1#2{%
7626   \expandafter\Hy@colorlink\csname @#1color\endcsname
7627   \special{button: %
7628     10000000 %
7629     \number\baselineskip\space
7630     #2%
7631   }%
7632 }
7633 \def\hyper@linkend{%
7634   \Hy@endcolorlink
7635 }
7636 \def\hyper@link#1#2#3{%
7637   \setbox\@tempboxa=\color@hbox #3\color@endbox
7638   \leavevmode
7639   \ifHy@raiselinks

```



```

7640 \@linkdim\dp\@tempboxa
7641 \lower\@linkdim\hbox{%
7642 \special{button: %
7643 \number\wd\@tempboxa\space
7644 \number\ht\@tempboxa\space
7645 #2%
7646 }%
7647 \expandafter\Hy@colorlink\csname @#1color\endcsname#3%
7648 \Hy@endcolorlink
7649 }%
7650 \@linkdim\ht\@tempboxa
7651 \advance\@linkdim by -6.5\p@
7652 \raise\@linkdim\hbox{}%
7653 \else
7654 \special{button: %
7655 \number\wd\@tempboxa\space
7656 \number\ht\@tempboxa\space
7657 #2%
7658 }%
7659 \expandafter\Hy@colorlink\csname @#1color\endcsname#3%
7660 \Hy@endcolorlink
7661 \fi
7662 }
7663 \def\hyper@linkurl#1#2{%
7664 \begingroup
7665 \hyper@chars
7666 \leavevmode
7667 \setbox\@tempboxa=\color@hbox #1\color@endbox
7668 \ifHy@raiselinks
7669 \@linkdim\dp\@tempboxa
7670 \lower\@linkdim\hbox{%
7671 \special{button: %
7672 \number\wd\@tempboxa\space
7673 \number\ht\@tempboxa\space
7674 launch: \wwwbrowser\space
7675 #2%
7676 }%
7677 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
7678 }%
7679 \@linkdim\ht\@tempboxa
7680 \advance\@linkdim by -6.5\p@
7681 \raise\@linkdim\hbox{}%
7682 \else
7683 \special{button: %
7684 \number\wd\@tempboxa\space
7685 \number\ht\@tempboxa\space
7686 launch: \wwwbrowser\space
7687 #2%
7688 }%
7689 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
7690 \fi
7691 \endgroup
7692 }
7693 \def\hyper@linkfile#1#2#3{%
7694 \begingroup
7695 \hyper@chars
7696 \leavevmode

```

```

7697 \setbox\@tempboxa=\color@hbox #1\color@endbox
7698 \ifHy@raiselinks
7699 \@linkdim\dp\@tempboxa
7700 \lower\@linkdim\hbox{%
7701 \special{button: %
7702 \number\wd\@tempboxa\space
7703 \number\ht\@tempboxa\space
7704 #3,%
7705 file: #2%
7706 }%
7707 \Hy@colorlink\@filecolor#1\Hy@endcolorlink
7708 }%
7709 \@linkdim\ht\@tempboxa
7710 \advance\@linkdim by -6.5\p@
7711 \raise\@linkdim\hbox{}}%
7712 \else
7713 \special{button: %
7714 \number\wd\@tempboxa\space
7715 \number\ht\@tempboxa\space
7716 #3,%
7717 file: #2%
7718 }%
7719 \Hy@colorlink\@filecolor#1\Hy@endcolorlink
7720 \fi
7721 \endgroup
7722 }
7723 \ifx\@pdfproducer\relax
7724 \def\@pdfproducer{dviwindo + Distiller}%
7725 \fi
7726 \def\PDF@FinishDoc{%
7727 \Hy@UseMaketitleInfos
7728 \special{PDF: Keywords \@pdfkeywords}%
7729 \special{PDF: Title \@pdftitle}%
7730 \special{PDF: Creator \@pdfcreator}%
7731 \ifx\@pdfcreationdate\@empty
7732 \else
7733 \special{PDF: CreationDate \@pdfcreationdate}%
7734 \fi
7735 \ifx\@pdfmoddate\@empty
7736 \else
7737 \special{PDF: ModDate \@pdfmoddate}%
7738 \fi
7739 \special{PDF: Author \@pdfauthor}%
7740 \ifx\@pdfproducer\relax
7741 \else
7742 \special{PDF: Producer \@pdfproducer}%
7743 \fi
7744 \special{PDF: Subject \@pdfsubject}%
7745 \Hy@DisableOption{pdfauthor}%
7746 \Hy@DisableOption{pdftitle}%
7747 \Hy@DisableOption{pdfsubject}%
7748 \Hy@DisableOption{pdfcreator}%
7749 \Hy@DisableOption{pdfcreationdate}%
7750 \Hy@DisableOption{pdfmoddate}%
7751 \Hy@DisableOption{pdfproducer}%
7752 \Hy@DisableOption{pdfkeywords}%
7753 }

```

```

7754 \def\PDF@SetupDoc{%
7755   \ifx\@baseurl\@empty
7756   \else
7757     \special{PDF: Base \@baseurl}%
7758   \fi
7759   \ifx\@pdfpagescrop\@empty\else
7760     \special{PDF: BBox \@pdfpagescrop}%
7761   \fi
7762   \def\Hy@temp{}%
7763   \ifx\@pdfstartpage\@empty
7764   \else
7765     \ifx\@pdfstartview\@empty
7766     \else
7767       \edef\Hy@temp{%
7768         ,Page=\@pdfstartpage
7769         ,View=\@pdfstartview
7770       }%
7771     \fi
7772   \fi
7773   \edef\Hy@temp{%
7774     \noexpand\pdfmark{%
7775       pdfmark=/DOCVIEW,%
7776       PageMode=/\@pdfpagemode
7777     }\Hy@temp
7778   }%
7779 }%
7780 \Hy@temp
7781 \ifx\@pdfpagescrop\@empty
7782 \else
7783   \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
7784 \fi
7785 \edef\Hy@temp{%
7786   \ifHy@toolbar\else /HideToolbar true\fi
7787   \ifHy@menubar\else /HideMenubar true\fi
7788   \ifHy>windowui\else /HideWindowUI true\fi
7789   \ifHy@fitwindow /FitWindow true\fi
7790   \ifHy@centerwindow /CenterWindow true\fi
7791   \ifHy@displaydoctitle /DisplayDocTitle true\fi
7792   \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
7793   \Hy@UseNameKey{Direction}\@pdfdirection
7794   \Hy@UseNameKey{ViewArea}\@pdfviewarea
7795   \Hy@UseNameKey{ViewClip}\@pdfviewclip
7796   \Hy@UseNameKey{PrintArea}\@pdfprintarea
7797   \Hy@UseNameKey{PrintClip}\@pdfprintclip
7798   \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
7799   \Hy@UseNameKey{Duplex}\@pdfduplex
7800   \ifx\@pdfpicktraybypdfsize\@empty
7801   \else
7802     /PickTrayByPDFSize \@pdfpicktraybypdfsize
7803   \fi
7804   \ifx\@pdfprintpagerange\@empty
7805   \else
7806     /PrintPageRange[\@pdfprintpagerange]%
7807   \fi
7808   \ifx\@pdfnumcopies\@empty
7809   \else
7810     /NumCopies \@pdfnumcopies

```

```

7811 \fi
7812 }%
7813 \pdfmark{pdfmark=/PUT,%
7814 Raw={%
7815 \string{Catalog\string}<<%
7816 \ifx\Hy@temp\@empty
7817 \else
7818 /ViewerPreferences<<\Hy@temp>>%
7819 \fi
7820 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
7821 \ifx\@pdflang\@empty
7822 \else
7823 /Lang(\@pdflang)%
7824 \fi
7825 >>%
7826 }%
7827 }%
7828 }
7829 </dviwindo>
7830 <*dvipdfm>

```

46.5 dvipdfm dvi to PDF converter

Provided by Mark Wicks (mwicks@kettering.edu)

```

7831 \providecommand*{\XR@ext}{pdf}
7832 \Hy@setbreaklinks{true}
7833 \newsavebox{\pdfm@box}
7834 \def\@pdfm@mark#1{\special{pdf:#1}}
7835 \def\@pdfm@dest#1{%
7836 \Hy@SaveLastskip
7837 \begingroup
7838 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
7839 \def\x{XYZ}%
7840 \ifx\x\@pdfview
7841 \def\x{XYZ @xpos @ypos null}%
7842 \else
7843 \def\x{FitH}%
7844 \ifx\x\@pdfview
7845 \def\x{FitH @ypos}%
7846 \else
7847 \def\x{FitBH}%
7848 \ifx\x\@pdfview
7849 \def\x{FitBH @ypos}%
7850 \else
7851 \def\x{FitV}%
7852 \ifx\x\@pdfview
7853 \def\x{FitV @xpos}%
7854 \else
7855 \def\x{FitBV}%
7856 \ifx\x\@pdfview
7857 \def\x{FitBV @xpos}%
7858 \else
7859 \def\x{Fit}%
7860 \ifx\x\@pdfview
7861 \let\x\@pdfview
7862 \else
7863 \def\x{FitB}%

```

```

7864         \ifx\x\@pdfview
7865         \let\x\@pdfview
7866     \else
7867         \def\x{FitR}%
7868         \ifx\x\@pdfview
7869             \Hy@Warning{'pdfview=FitR' is not supported}%
7870             \def\x{XYZ @xpos @ypos null}%
7871         \else
7872             \@onelevel@sanitize\@pdfview
7873             \Hy@Warning{Unknown value '\@pdfview' for pdfview}%
7874             \def\x{XYZ @xpos @ypos null}%
7875         \fi
7876     \fi
7877 \fi
7878 \fi
7879 \fi
7880 \fi
7881 \fi
7882 \fi
7883 \@pdfm@mark{dest (\Hy@pstringDest) [@thispage /x]}%
7884 \endgroup
7885 \Hy@RestoreLastskip
7886 }
7887 \providecommand*\@pdfview{XYZ}
7888 \providecommand*\@pdfborder{0 0 1}
7889 \providecommand*\@pdfborderstyle{}
7890 \def\hyper@anchor#1{%
7891     \@pdfm@dest{#1}%
7892 }
7893 \def\hyper@anchorstart#1{%
7894     \Hy@activeanchortrue
7895     \@pdfm@dest{#1}%
7896 }
7897 \def\hyper@anchorend{%
7898     \Hy@activeanchorfalse
7899 }
7900 \newcounter{Hy@AnnotLevel}
7901 \ifHy@ocgcolorlinks
7902     \def\OBJ@OCG@view{@OCG@view}%
7903     \@pdfm@mark{%
7904         obj \OBJ@OCG@view <<%
7905             /Type/OCG%
7906             /Name(View)%
7907             /Usage<<%
7908             /Print<<%
7909             /PrintState/OFF%
7910             >>%
7911             /View<<%
7912             /ViewState/ON%
7913             >>%
7914         >>%
7915     >>%
7916 }%
7917 \@pdfm@mark{close \OBJ@OCG@view}%
7918 \def\OBJ@OCG@print{@OCG@print}%
7919 \@pdfm@mark{%
7920     obj \OBJ@OCG@print <<%

```

```

7921      /Type/OCG%
7922      /Name(Print)%
7923      /Usage<<%
7924          /Print<<%
7925              /PrintState/ON%
7926          >>%
7927      /View<<%
7928          /ViewState/OFF%
7929      >>%
7930  >>%
7931  >>%
7932 }%
7933  \@pdfmark{close \OBJ@OCG@print}%
7934  \def\OBJ@OCGs{@OCGs}%
7935  \@pdfmark{%
7936      obj \OBJ@OCGs [%
7937          \OBJ@OCG@view\space\OBJ@OCG@print
7938      ]%
7939  }%
7940  \@pdfmark{close \OBJ@OCGs}%
7941  \@pdfmark{%
7942      put @catalog <<%
7943          /OCProperties<<%
7944              /OCGs \OBJ@OCGs
7945          /D<<%
7946              /OFF[\OBJ@OCG@print]%
7947              /AS[%
7948                  <<%
7949                      /Event/View%
7950                      /OCGs \OBJ@OCGs
7951                      /Category[/View]%
7952                  >>%
7953                  <<%
7954                      /Event/Print%
7955                      /OCGs \OBJ@OCGs
7956                      /Category[/Print]%
7957                  >>%
7958                  <<%
7959                      /Event/Export%
7960                      /OCGs \OBJ@OCGs
7961                      /Category[/Print]%
7962                  >>%
7963              ]%
7964          >>%
7965      >>%
7966      >>%
7967  }%
7968  \AtBeginShipout{%
7969      \setbox\AtBeginShipoutBox=\hbox{%
7970          \copy\AtBeginShipoutBox
7971          \@pdfmark{%
7972              put @resources <<%
7973                  /Properties<<%
7974                      /OCView \OBJ@OCG@view
7975                      /OCPrint \OBJ@OCG@print
7976                  >>%
7977              >>%

```

```

7978     }%
7979 }%
7980 }%
7981 \AtBeginDocument{%
7982   \def\Hy@colorlink#1{%
7983     \begingroup
7984     \ifHy@ocgcolorlinks
7985       \def\Hy@ocgcolor{#1}%
7986       \setbox0=\color@hbox
7987     \else
7988       \HyColor@UseColor#1%
7989     \fi
7990   }%
7991   \def\Hy@endcolorlink{%
7992     \ifHy@ocgcolorlinks
7993       \color@endbox
7994       \mbox{%
7995         \@pdfm@mark{content /OC/OCPrint BDC}%
7996         \rlap{\copy0}%
7997         \@pdfm@mark{content EMC/OC/OCView BDC}%
7998         \begingroup
7999           \expandafter\HyColor@UseColor\Hy@ocgcolor
8000         \box0 %
8001       \endgroup
8002       \@pdfm@mark{content EMC}%
8003     }%
8004     \fi
8005   \endgroup
8006 }%
8007 }%
8008 \else
8009   \Hy@DisableOption{ocgcolorlinks}%
8010 \fi

8011 \def\Hy@BeginAnnot#1{%
8012   \stepcounter{Hy@AnnotLevel}%
8013   \ifnum\value{Hy@AnnotLevel}=\@ne
8014     #1%
8015   \fi
8016 }
8017 \def\Hy@endAnnot{%
8018   \ifnum\value{Hy@AnnotLevel}=\@ne
8019     \Hy@endcolorlink
8020     \@pdfm@mark{eann}%
8021   \fi
8022   \addtocounter{Hy@AnnotLevel}\m@ne
8023 }

8024 \def\Hy@undefinedname{UNDEFINED}
8025 \def\hyper@linkstart#1#2{%
8026   \Hy@BeginAnnot{%
8027     \protected@edef\Hy@testname{#2}%
8028     \ifx\Hy@testname\@empty
8029       \Hy@Warning{%
8030         Empty destination name,\MessageBreak
8031         using '\Hy@undefinedname'%
8032       }%
8033     \let\Hy@testname\Hy@undefinedname
8034   \else

```

```

8035     \Hy@pstringdef\Hy@testname{%
8036         \expandafter\HyperDestNameFilter\expandafter{\Hy@testname}%
8037     }%
8038     \fi
8039     \@pdfm@mark{%
8040         bann<<%
8041         /Type/Annot%
8042         /Subtype/Link%
8043         \ifHy@pdfa /F 4\fi
8044         \Hy@setpdfborder
8045         \expandafter\ifx\csname @#1bordercolor\endcsname\relax
8046         \else
8047             /C[\csname @#1bordercolor\endcsname]%
8048         \fi
8049         /A<<%
8050         /S/GoTo%
8051         /D(\Hy@testname)%
8052         >>%
8053     >>%
8054     }%
8055     \expandafter\Hy@colorlink\csname @#1color\endcsname
8056 }%
8057 }
8058 \def\hyper@linkend{\Hy@EndAnnot}%
8059 \def\hyper@link#1#2#3{%
8060     \hyper@linkstart{#1}{#2}#3\hyper@linkend
8061 }
8062 \def\hyper@linkfile#1#2#3{%
8063     \leavevmode
8064     \Hy@BeginAnnot{%
8065         \Hy@pstringdef\Hy@pstringF{#2}%
8066         \Hy@pstringdef\Hy@pstringD{#3}%
8067         \@pdfm@mark{%
8068             bann<<%
8069             /Type/Annot%
8070             /Subtype/Link%
8071             \ifHy@pdfa /F 4\fi
8072             \Hy@setpdfborder
8073             \ifx\@filebordercolor\relax
8074             \else
8075                 /C[\@filebordercolor]%
8076             \fi
8077             /A<<%
8078             /S/GoToR%
8079             /F(\Hy@pstringF)%
8080             /D\ifx\@#3\@pdfstartview\else(\Hy@pstringD)\fi
8081             \Hy@SetNewWindow
8082             >>%
8083         >>%
8084     }%
8085     \Hy@colorlink\@filecolor
8086 }%
8087 #1%
8088 \Hy@EndAnnot
8089 }
8090 \def\hyper@linkurl#1#2{%
8091     \leavevmode

```



```

8092 \Hy@BeginAnnot{%
8093   \Hy@pstringdef\Hy@pstringURI{#2}%
8094   \@pdfm@mark{%
8095     bann<<%
8096     /Type/Annot%
8097     /Subtype/Link%
8098     \ifHy@pdfa /F 4\fi
8099     \Hy@setpdfborder
8100     \ifx\@urlbordercolor\relax
8101     \else
8102       /C[\@urlbordercolor]%
8103     \fi
8104     /A<<%
8105     /S/URI%
8106     /URI(\Hy@pstringURI)%
8107     >>%
8108   >>%
8109   }%
8110   \Hy@colorlink\@urlcolor
8111 }%
8112 #1%
8113 \Hy@endAnnot
8114 }
8115 \def\Acrobatmenu#1#2{%
8116   \Hy@Acrobatmenu{#1}{#2}{%
8117     \Hy@BeginAnnot{%
8118       \@pdfm@mark{%
8119         bann<<%
8120         /Type/Annot%
8121         /Subtype/Link%
8122         \ifHy@pdfa /F 4\fi
8123         /A<<%
8124         /S/Named%
8125         /N/#1%
8126         >>%
8127         \Hy@setpdfborder
8128         \ifx\@menubordercolor\relax
8129         \relax
8130         /C[\@menubordercolor]%
8131       \fi
8132     >>%
8133   }%
8134   \Hy@colorlink\@menucolor
8135 }%
8136 #2%
8137 \Hy@endAnnot
8138 }%
8139 }
8140 \ifx\@pdfproducer\relax
8141 \def\@pdfproducer{dvipdfm}%

```

Detect XeTeX. However, but xdvipdfmx will overwrite it in the final PDF file.

```

8142 \begingroup\expandafter\expandafter\expandafter\endgroup
8143 \expandafter\ifx\csname XeTeXversion\endcsname\relax
8144 \else
8145   \edef\@pdfproducer{XeTeX \the\XeTeXversion\XeTeXrevision}%
8146 \fi
8147 \fi

```

```

8148 \def\PDF@FinishDoc{%
8149   \Hy@UseMaketitleInfos
8150   \@pdfm@mark{%
8151     docinfo<<%
8152       /Title(\@pdftitle)%
8153       /Subject(\@pdfsubject)%
8154       /Creator(\@pdfcreator)%
8155       \ifx\@pdfcreationdate\@empty
8156       \else
8157         /CreationDate(\@pdfcreationdate)%
8158       \fi
8159       \ifx\@pdfmoddate\@empty
8160       \else
8161         /ModDate(\@pdfmoddate)%
8162       \fi
8163       /Author(\@pdfauthor)%
8164       \ifx\@pdfproducer\relax
8165       \else
8166         /Producer(\@pdfproducer)%
8167       \fi
8168       /Keywords(\@pdfkeywords)%
8169     >>%
8170   }%
8171   \Hy@DisableOption{pdfauthor}%
8172   \Hy@DisableOption{pdftitle}%
8173   \Hy@DisableOption{pdfsubject}%
8174   \Hy@DisableOption{pdfcreator}%
8175   \Hy@DisableOption{pdfcreationdate}%
8176   \Hy@DisableOption{pdfmoddate}%
8177   \Hy@DisableOption{pdfproducer}%
8178   \Hy@DisableOption{pdfkeywords}%
8179 }

8180 \def\PDF@SetupDoc{%
8181   \edef\Hy@temp{%
8182     \ifHy@toolbar\else /HideToolbar true\fi
8183     \ifHy@menubar\else /HideMenubar true\fi
8184     \ifHy>windowui\else /HideWindowUI true\fi
8185     \ifHy@fitwindow /FitWindow true\fi
8186     \ifHy@centerwindow /CenterWindow true\fi
8187     \ifHy@displaydoctitle /DisplayDocTitle true\fi
8188     \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
8189     \Hy@UseNameKey{Direction}\@pdfdirection
8190     \Hy@UseNameKey{ViewArea}\@pdfviewarea
8191     \Hy@UseNameKey{ViewClip}\@pdfviewclip
8192     \Hy@UseNameKey{PrintArea}\@pdfprintarea
8193     \Hy@UseNameKey{PrintClip}\@pdfprintclip
8194     \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
8195     \Hy@UseNameKey{Duplex}\@pdfduplex
8196     \ifx\@pdfpicktraybypdfsize\@empty
8197     \else
8198       /PickTrayByPDFSize \@pdfpicktraybypdfsize
8199     \fi
8200     \ifx\@pdfprintpagerange\@empty
8201     \else
8202       /PrintPageRange[\@pdfprintpagerange]%
8203     \fi
8204     \ifx\@pdfnumcopies\@empty

```

```

8205 \else
8206 /NumCopies \@pdfnumcopies
8207 \fi
8208 }%
8209 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
8210 \@pdfm@mark{%
8211 docview<<%
8212 \ifx\@pdfstartpage\@empty
8213 \else
8214 \ifx\@pdfstartview\@empty
8215 \else
8216 /OpenAction[@page\@pdfstartpage\@pdfstartview]%
8217 \fi
8218 \fi
8219 \ifx\@baseurl\@empty
8220 \else
8221 /URI<</Base(\Hy@pstringB)>>%
8222 \fi
8223 /PageMode/\@pdfpagemode
8224 \ifx\Hy@temp\@empty
8225 \else
8226 /ViewerPreferences<<\Hy@temp>>%
8227 \fi
8228 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
8229 \ifx\@pdflang\@empty
8230 \else
8231 /Lang(\@pdflang)%
8232 \fi
8233 >>%
8234 }%
8235 \ifx\@pdfpagescrop\@empty
8236 \else
8237 \@pdfm@mark{put @pages <</CropBox[\@pdfpagescrop]>>}%
8238 \fi
8239 }

8240 \AtBeginShipoutFirst{%
8241 \ifx\special@paper\@empty
8242 \else
8243 \ifHy@setpagesize
8244 \special{papersize=\special@paper}%
8245 \fi
8246 \fi
8247 \Hy@DisableOption{setpagesize}%
8248 }
8249 </dvipdfm>

```

46.6 VTeX typesetting system

Provided by MicroPress, May 1998. They require VTeX version 6.02 or newer; see <http://www.micropress-inc.com/> for details.

```

8250 <*vtexhtml>
8251 \providecommand*{\XR@ext}{htm}
8252 \RequirePackage{vtexhtml}
8253 \newif\if@Localurl
8254 \def\PDF@FinishDoc{}
8255 \def\PDF@SetupDoc{%

```

```

8256 \ifx\@baseurl\@empty
8257 \else
8258 \special{!direct <base href="\@baseurl">}%
8259 \fi
8260 }
8261 \def\@urltype{url}
8262 \def\hyper@link#1#2#3{%
8263 \leavevmode
8264 \special{!direct <a href=%
8265 \hyper@quote\hyper@hash\HyperDestNameFilter{#2}\hyper@quote>}%
8266 #3%
8267 \special{!direct </a>}%
8268 }
8269 \def\hyper@linkurl#1#2{%
8270 \begingroup
8271 \hyper@chars
8272 \leavevmode
8273 \MathBSuppress=1\relax
8274 \special{!direct <a href=%
8275 \hyper@quote\HyperDestNameFilter{#2}\hyper@quote>}%
8276 #1%
8277 \MathBSuppress=0\relax
8278 \special{!direct </a>}%
8279 \endgroup
8280 }
8281 \def\hyper@linkfile#1#2#3{%
8282 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\else\\#3\fi}%
8283 }
8284 \def\hyper@linkstart#1#2{%
8285 \def\Hy@tempa{#1}\ifx\Hy@tempa\@urltype
8286 \@Localurltrue
8287 \special{!direct <a href=\hyper@quote#2\hyper@quote>}%
8288 \else
8289 \@Localurlfalse
8290 \begingroup
8291 \hyper@chars
8292 \special{!aref \HyperDestNameFilter{#2}}%
8293 \endgroup
8294 \fi
8295 }
8296 \def\hyper@linkend{%
8297 \if@Localurl
8298 \special{!endaref}%
8299 \else
8300 \special{!direct </a>}%
8301 \fi
8302 }
8303 \def\hyper@anchorstart#1{%
8304 \Hy@SaveLastskip
8305 \begingroup
8306 \hyper@chars
8307 \special{!aname #1}%
8308 \special{!direct <a name=%
8309 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
8310 \endgroup
8311 \Hy@activeanchortrue
8312 }

```

```

8313 \def\hyper@anchorend{%
8314   \special{!direct </a>}%
8315   \Hy@activeanchorfalse
8316   \Hy@RestoreLastskip
8317 }
8318 \def\hyper@anchor#1{%
8319   \Hy@SaveLastskip
8320   \begingroup
8321     \let\protect=\string
8322     \hyper@chars
8323     \leavevmode
8324     \special{!aname #1}%
8325     \special{!direct <a name=%
8326       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
8327   \endgroup
8328   \Hy@activeanchortrue
8329   \bgroup\anchor@spot\egroup
8330   \special{!direct </a>}%
8331   \Hy@activeanchorfalse
8332   \Hy@RestoreLastskip
8333 }
8334 \def\@Form[#1]{\typeout{Sorry, TeXpider does not yet support FORMs}}
8335 \def\@endForm{}
8336 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
8337   \typeout{Sorry, TeXpider does not yet support FORM gauges}%
8338 }
8339 \def\@TextField[#1]#2{% parameters, label
8340   \typeout{Sorry, TeXpider does not yet support FORM text fields}%
8341 }
8342 \def\@CheckBox[#1]#2{% parameters, label
8343   \typeout{Sorry, TeXpider does not yet support FORM checkboxes}%
8344 }
8345 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
8346   \typeout{Sorry, TeXpider does not yet support FORM choice menus}%
8347 }
8348 \def\@PushButton[#1]#2{% parameters, label
8349   \typeout{Sorry, TeXpider does not yet support FORM pushbuttons}%
8350 }
8351 \def\@Reset[#1]#2{%
8352   \typeout{Sorry, TeXpider does not yet support FORMs}%
8353 }
8354 \def\@Submit[#1]#2{%
8355   \typeout{Sorry, TeXpider does not yet support FORMs}%
8356 }
8357 </vtexhtml>
8358 <*vtex>

```

VTeX version 6.68 supports \mediawidth and \mediaheight. The \ifx construct is better than a \csname, because it avoids the definition and the hash table entry of a previous undefined macro.

```

8359 \ifx\mediaheight\@undefined
8360 \else
8361   \ifx\mediaheight\relax
8362   \else
8363     \ifHy@setpagesize
8364       \providecommand*{\VTeXInitMediaSize}{%
8365         \@ifundefined{stockwidth}{%

```

```

8366         \ifdim\paperheight>0pt %
8367             \setlength\mediaheight\paperheight
8368         \fi
8369         \ifdim\paperheight>0pt %
8370             \setlength\mediawidth\paperwidth
8371         \fi
8372     }{%
8373         \ifdim\stockheight>0pt %
8374             \setlength\mediaheight\stockheight
8375         \fi
8376         \ifdim\stockwidth>0pt %
8377             \setlength\mediawidth\stockwidth
8378         \fi
8379     }%
8380 }%
8381 \AtBeginDocument{\VTeXInitMediaSize}%
8382 \fi
8383 \Hy@DisableOption{setpagesize}%
8384 \fi
8385 \fi

```

Older versions of VTeX require xyz in lower case.

```

8386 \providecommand*\@pdfview{xyz}
8387 \providecommand*\@pdfborder{0 0 1}
8388 \providecommand*\@pdfborderstyle{}
8389 \let\CurrentBorderColor\@linkbordercolor
8390 \def\hyper@anchor#1{%
8391     \Hy@SaveLastskip
8392     \begingroup
8393         \let\protect=\string
8394         \hyper@chars
8395         \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
8396     \endgroup
8397     \Hy@activeanchortrue
8398     \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
8399     \Hy@activeanchorfalse
8400     \Hy@RestoreLastskip
8401 }
8402 \def\hyper@anchorstart#1{%
8403     \Hy@SaveLastskip
8404     \begingroup
8405         \hyper@chars
8406         \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
8407     \endgroup
8408     \Hy@activeanchortrue
8409 }
8410 \def\hyper@anchorend{%
8411     \Hy@activeanchorfalse
8412     \Hy@RestoreLastskip
8413 }
8414 \def\@urltype{url}
8415 \def\Hy@undefinedname{UNDEFINED}
8416 \def\hyper@linkstart#1#2{%
8417     \Hy@pstringdef\Hy@pstringURI{#2}%
8418     \expandafter\Hy@colorlink\csname @#1color\endcsname
8419     \@ifundefined{@#1bordercolor}{%
8420         \let\CurrentBorderColor\relax
8421     }{%

```

```

8422 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
8423 }%
8424 \def\Hy@tempa{#1}%
8425 \ifx\Hy@tempa\@urlltype
8426 \special{!%
8427   aref <u=/Type /Action /S /URI /URI (\Hy@pstringURI)>;%
8428   a=<%
8429     \ifHy@pdfa /F 4\fi
8430     \Hy@setpdfborder
8431     \ifx\CurrentBorderColor\relax
8432     \else
8433       /C [\CurrentBorderColor]%
8434     \fi
8435   >%
8436 }%
8437 \else
8438 \protected@edef\Hy@testname{#2}%
8439 \ifx\Hy@testname\@empty
8440 \Hy@Warning{%
8441   Empty destination name,\MessageBreak
8442   using '\Hy@undefinedname'%
8443 }%
8444 \let\Hy@testname\Hy@undefinedname
8445 \fi
8446 \special{!%
8447   aref \expandafter\HyperDestNameFilter
8448   \expandafter{\Hy@testname};%
8449   a=<%
8450     \ifHy@pdfa /F 4\fi
8451     \Hy@setpdfborder
8452     \ifx\CurrentBorderColor\relax
8453     \else
8454       /C [\CurrentBorderColor]%
8455     \fi
8456   >%
8457 }%
8458 \fi
8459 }
8460 \def\hyper@linkend{%
8461 \special{!endaref}%
8462 \Hy@endcolorlink
8463 }
8464 \def\hyper@linkfile#1#2#3{%
8465 \leavevmode
8466 \special{!%
8467   aref <%
8468     \ifnum\Hy@VTeXversion>753 \ifHy@newwindow n\fi\fi
8469     f=#2>#3;%
8470   a=<%
8471     \ifHy@pdfa /F 4\fi
8472     \Hy@setpdfborder
8473     \ifx\@filebordercolor\relax
8474     \else
8475       /C [\@filebordercolor]%
8476     \fi
8477   >%
8478 }%

```

```

8479 \Hy@colorlink\@filecolor#1\Hy@endcolorlink
8480 \special{!endaref}%
8481 }
8482 \def\hyper@linkurl#1#2{%
8483 \begingroup
8484 \Hy@pstringdef\Hy@pstringURI{#2}%
8485 \hyper@chars
8486 \leavevmode
8487 \special{!%
8488   aref <u=/Type /Action /S /URI /URI (\Hy@pstringURI)>;%
8489   a=<%
8490   \ifHy@pdfa /F 4\fi
8491   \Hy@setpdfborder
8492   \ifx\@urlbordercolor\relax
8493   \else
8494   /C [\@urlbordercolor]%
8495   \fi
8496   >%
8497   }%
8498   \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
8499   \special{!endaref}%
8500 \endgroup
8501 }
8502 \def\hyper@link#1#2#3{%
8503 \@ifundefined{#@#1bordercolor}{%
8504 \let\CurrentBorderColor\relax
8505 }{%
8506 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
8507 }%
8508 \leavevmode
8509 \protected@edef\Hy@testname{#2}%
8510 \ifx\Hy@testname\@empty
8511 \Hy@Warning{%
8512   Empty destination name,\MessageBreak
8513   using '\Hy@undefinedname'%
8514 }%
8515 \let\Hy@testname\Hy@undefinedname
8516 \fi
8517 \special{!%
8518   aref \expandafter\HyperDestNameFilter
8519   \expandafter{\Hy@testname};%
8520   a=<%
8521   \ifHy@pdfa /F 4\fi
8522   \Hy@setpdfborder
8523   \ifx\CurrentBorderColor\relax
8524   \else
8525   /C [\CurrentBorderColor]%
8526   \fi
8527   >%
8528   }%
8529   \expandafter\Hy@colorlink\csname @#1color\endcsname#3\Hy@endcolorlink
8530   \special{!endaref}%
8531 }
8532 \def\hyper@image#1#2{%
8533 \hyper@linkurl{#2}{#1}%
8534 }
8535 \def\@hyper@launch run:#1\#2#3{%

```



```

8536 \Hy@pstringdef\Hy@pstringF{#1}%
8537 \Hy@pstringdef\Hy@pstringP{#3}%
8538 \leavevmode
8539 \special{!aref %
8540   <u=%
8541     /Type/Action%
8542     /S/Launch%
8543     /F(\Hy@pstringF)%
8544     \Hy@SetNewWindow
8545     \ifx\#3\else /Win<</F(\Hy@pstringF)/P(\Hy@pstringP)>>\fi%
8546   >;%
8547   a=<%
8548     \ifHy@pdfa /F 4\fi
8549     \Hy@setpdfborder
8550     \ifx\@runbordercolor\relax
8551     \else
8552       /C[\@runbordercolor]%
8553     \fi
8554   >%
8555 }%
8556 \Hy@colorlink\@runcolor#2\Hy@endcolorlink
8557 \special{!endaref}%
8558 }
8559 \def\Acrobatmenu#1#2{%
8560   \Hy@Acrobatmenu{#1}{#2}{%
8561     \special{!%
8562       aref <u=/S /Named /N /#1>;%
8563       a=<%
8564         \ifHy@pdfa /F 4\fi
8565         \Hy@setpdfborder
8566         \ifx\@menubordercolor\relax
8567         \else
8568           /C[\@menubordercolor]%
8569         \fi
8570       >%
8571     }%
8572     \Hy@colorlink\@menucolor#2\Hy@endcolorlink
8573     \special{!endaref}%
8574   }%
8575 }

```

The following code (transition effects) is made by Alex Kostin.

The code below makes sense for $\text{\texttt{V\TeX}}$ 7.02 or later.

Please never use $\text{\texttt{\@ifundefined{VTeXversion}\{..\}\{..\}}}$ globally.

```

8576 \ifnum\Hy@VTeXversion<702 %
8577 \else
8578   \def\hyper@pagetransition{%
8579     \ifx\@pdfpagetransition\relax
8580     \else
8581       \ifx\@pdfpagetransition\empty

```

Standard incantation.

1. Does an old entry have to be deleted? 2. If 1=yes, how to delete?

```

8582     \else
8583       \hvtex@parse@trans\@pdfpagetransition
8584     \fi
8585   \fi
8586 }%

```

I have to write an “honest” parser to convert raw PDF code into \TeX \special.
(AVK)

Syntax of \TeX \special{!trans <transition_effect>}:

```
<transition_effect> ::= <transition_style>[,<transition_duration>]
<transition_style> ::= <Blinds_effect> | <Box_effect> |
                        <Dissolve_effect> | <Glitter_effect> |
                        <Split_effect> | <Wipe_effect>
<Blinds_effect> ::= B[<effect_dimension>]
<Box_effect> ::= X[<effect_motion>]
<Dissolve_effect> ::= D
<Glitter_effect> ::= G[<effect_direction>]
<Split_effect> ::= S[<effect_motion>][<effect_dimension>]
<Wipe_effect> ::= W[<effect_direction>]
<Replace_effect> ::= R
<effect_direction> ::= <number>
<effect_dimension> ::= H | V
<effect_motion> ::= I | O
<transition_duration> ::= <number>
```

Transition codes:

```
8587 \def\hvtex@trans@effect@Blinds{\def\hvtex@trans@code{B}}%
8588 \def\hvtex@trans@effect@Box{\def\hvtex@trans@code{X}}%
8589 \def\hvtex@trans@effect@Dissolve{\def\hvtex@trans@code{D}}%
8590 \def\hvtex@trans@effect@Glitter{\def\hvtex@trans@code{G}}%
8591 \def\hvtex@trans@effect@Split{\def\hvtex@trans@code{S}}%
8592 \def\hvtex@trans@effect@Wipe{\def\hvtex@trans@code{W}}%
8593 \def\hvtex@trans@effect@R{\def\hvtex@trans@code{R}}%
```

Optional parameters:

```
8594 \def\hvtex@par@dimension{/Dm}%
8595 \def\hvtex@par@direction{/Di}%
8596 \def\hvtex@par@duration{/D}%
8597 \def\hvtex@par@motion{/M}%
```

Tokenizer:

```
8598 \def\hvtex@gettoken{\expandafter\hvtex@gettoken@\hvtex@buffer\@nil}%
```

Notice that tokens in the input buffer must be space delimited.

```
8599 \def\hvtex@gettoken@#1 #2\@nil{%
8600   \edef\hvtex@token{#1}%
8601   \edef\hvtex@buffer{#2}%
8602 }%
8603 \def\hvtex@parse@trans#1{%
```

Initializing code:

```
8604 \let\hvtex@trans@code\@empty
8605 \let\hvtex@param@dimension\@empty
8606 \let\hvtex@param@direction\@empty
8607 \let\hvtex@param@duration\@empty
8608 \let\hvtex@param@motion\@empty
8609 \edef\hvtex@buffer{#1\space}%
```

First token is the PDF transition name without escape.

```
8610 \hvtex@gettoken
8611 \ifx\hvtex@token\@empty
```

Leading space(s)?

```
8612 \ifx\hvtex@buffer\@empty
```

The buffer is empty, nothing to do.

```

8613     \else
8614     \hvtex@gettoken
8615     \fi
8616 \fi
8617 \csname hvtex@trans@effect@\hvtex@token\endcsname

```

Now is time to parse optional parameters.

```

8618     \hvtex@trans@params
8619 }%

```

Reentrant macro to parse optional parameters.

```

8620 \def\hvtex@trans@params{%
8621     \ifx\hvtex@buffer\@empty
8622     \else
8623     \hvtex@gettoken
8624     \let\hvtex@trans@par\hvtex@token
8625     \ifx\hvtex@buffer\@empty
8626     \else
8627     \hvtex@gettoken
8628     \ifx\hvtex@trans@par\hvtex@par@duration

```

/D is the effect duration in seconds. V_T_EX special takes it in milliseconds.

```

8629         \let\hvtex@param@duration\hvtex@token
8630     \else \ifx\hvtex@trans@par\hvtex@par@motion

```

/M can be either /I or /O

```

8631         \expandafter\edef\expandafter\hvtex@param@motion
8632         \expandafter{\expandafter\@gobble\hvtex@token}%
8633     \else \ifx\hvtex@trans@par\hvtex@par@dimension

```

/Dm can be either /H or /V

```

8634         \expandafter\edef\expandafter\hvtex@param@dimension
8635         \expandafter{\expandafter\@gobble\hvtex@token}%
8636     \else \ifx\hvtex@trans@par\hvtex@par@direction

```

Valid values for /Di are 0, 270, 315 (the Glitter effect) or 0, 90, 180, 270 (the Wipe effect).

```

8637         \let\hvtex@param@direction\hvtex@token
8638     \fi\fi\fi\fi
8639 \fi
8640 \fi
8641 \ifx\hvtex@buffer\@empty
8642     \let\next\hvtex@produce@trans
8643 \else
8644     \let\next\hvtex@trans@params
8645 \fi
8646 \next
8647 }%

```

Merge <transition_effect> and issue the special when possible. Too lazy to validate optional parameters.

```

8648 \def\hvtex@produce@trans{%
8649     \let\vtex@trans@special\@empty
8650     \if S\hvtex@trans@code
8651     \edef\vtex@trans@special{\hvtex@trans@code
8652     \hvtex@param@dimension\hvtex@param@motion}%
8653 \else\if B\hvtex@trans@code
8654     \edef\vtex@trans@special{%
8655     \hvtex@trans@code\hvtex@param@dimension

```

```

8656     }%
8657     \else\if X\hvtex@trans@code
8658         \edef\vtex@trans@special{%
8659             \hvtex@trans@code\hvtex@param@motion
8660         }%
8661     \else\if W\hvtex@trans@code
8662         \edef\vtex@trans@special{%
8663             \hvtex@trans@code\hvtex@param@direction
8664         }%
8665     \else\if D\hvtex@trans@code
8666         \let\vtex@trans@special\hvtex@trans@code
8667     \else\if R\hvtex@trans@code
8668         \let\vtex@trans@special\hvtex@trans@code
8669     \else\if G\hvtex@trans@code
8670         \edef\vtex@trans@special{%
8671             \hvtex@trans@code\hvtex@param@direction
8672         }%
8673     \fi\fi\fi\fi\fi\fi\fi
8674     \ifx\vtex@trans@special\@empty
8675     \else
8676         \ifx\hvtex@param@duration\@empty
8677         \else
8678             \setlength{\dimen@}{\hvtex@param@duration\p}%

```

I'm not guilty of possible overflow.

```

8679         \multiply\dimen@\@m
8680         \edef\vtex@trans@special{%
8681             \vtex@trans@special,\strip@pt\dimen@
8682         }%
8683     \fi

```

And all the mess is just for this.

```

8684     \special{!trans \vtex@trans@special}%
8685     \fi
8686 }%
8687 \def\hyper@pageduration{%
8688     \ifx\@pdfpageduration\relax
8689     \else
8690         \ifx\@pdfpageduration\@empty
8691             \special{!duration-}%
8692         \else
8693             \special{!duration \@pdfpageduration}%
8694         \fi
8695     \fi
8696 }%
8697 \def\hyper@pagehidden{%
8698     \ifHy@useHidKey
8699         \special{!hidden\ifHy@pdfpagehidden +\else -\fi}%
8700     \fi
8701 }%
8702 \g@addto@macro\Hy@EveryPageBoxHook{%
8703     \hyper@pagetransition
8704     \hyper@pageduration
8705     \hyper@pagehidden
8706 }%
8707 \fi

```

Caution: In opposite to the other drivers, the argument of `\special{!onopen #1}` is a reference name. The VTeX's postscript mode will work with a version higher than

7.0x.

The command \VTeXOS is defined since version 7.45. Magic values encode the operating system:

1: WinTel

2: Linux

3: OS/2

4: MacOS

5: MacOS/X

```

8708 \ifx\@pdfproducer\relax
8709 \def\@pdfproducer{VTeX}%
8710 \ifnum\Hy@VTeXversion>\z@
8711 \count@VTeXversion
8712 \divide\count@ 100 %
8713 \edef\@pdfproducer{\@pdfproducer\space v\the\count@}%
8714 \multiply\count@ -100 %
8715 \advance\count@VTeXversion
8716 \edef\@pdfproducer{%
8717 \@pdfproducer
8718 .\ifnum\count@<10 0\fi\the\count@
8719 \ifx\VTeXOS\undefined\else
8720 \ifnum\VTeXOS>0 %
8721 \ifnum\VTeXOS<6 %
8722 \space(%
8723 \ifcase\VTeXOS
8724 \or Windows\or Linux\or OS/2\or MacOS\or MacOS/X%
8725 \fi
8726 )%
8727 \fi
8728 \fi
8729 \fi
8730 ,\space
8731 \ifnum\OpMode=\@ne PDF\else PS\fi
8732 \space backend%
8733 \ifx\gexmode\undefined\else
8734 \ifnum\gexmode>\z@\space with GeX\fi
8735 \fi
8736 }%
8737 \fi
8738 \fi

```

Current !pdfinfo key syntax:

Key	Field	Type
a	Author	String
b	CropBox	String
c	Creator	String
k	Keywords	String
l	PageLayout	PS
p	PageMode	PS
r	Producer	String
s	Subject	String
t	Title	String
u	URI	PS
v	ViewPreferences	PS

Note: PS objects that are dicts are in <<<. .>>> (yuck; no choice).

```

8739 \def\PDF@SetupDoc{%
8740 \ifx\@pdfpagescrop\empty

```

```

8741 \else
8742   \special{!pdfinfo b=<\@pdfpagescrop>}%
8743 \fi
8744 \ifx\@pdfstartpage\@empty
8745 \else
8746   \ifx\@pdfstartview\@empty
8747   \else
8748     \special{!onopen Page\@pdfstartpage}%
8749   \fi
8750 \fi
8751 \special{!pdfinfo p=</\@pdfpagemode>}%
8752 \ifx\@baseurl\@empty
8753 \else
8754   \special{!pdfinfo u=<<</Base (\@baseurl)>>>}%
8755 \fi
8756 \special{!pdfinfo v=<<<%
8757   \ifHy@toolbar\else /HideToolbar true\fi
8758   \ifHy@menubar\else /HideMenubar true\fi
8759   \ifHy@windowui\else /HideWindowUI true\fi
8760   \ifHy@fitwindow /FitWindow true\fi
8761   \ifHy@centerwindow /CenterWindow true\fi
8762   \ifHy@displaydoctitle /DisplayDocTitle true\fi
8763   \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
8764   \Hy@UseNameKey{Direction}\@pdfdirection
8765   \Hy@UseNameKey{ViewArea}\@pdfviewarea
8766   \Hy@UseNameKey{ViewClip}\@pdfviewclip
8767   \Hy@UseNameKey{PrintArea}\@pdfprintarea
8768   \Hy@UseNameKey{PrintClip}\@pdfprintclip
8769   \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
8770   \Hy@UseNameKey{Duplex}\@pdfduplex
8771   \ifx\@pdfpicktraybypdfsize\@empty
8772   \else
8773     /PickTrayByPDFSize \@pdfpicktraybypdfsize
8774   \fi
8775   \ifx\@pdfprintpagerange\@empty
8776   \else
8777     /PrintPageRange[\@pdfprintpagerange]%
8778   \fi
8779   \ifx\@pdfnumcopies\@empty
8780   \else
8781     /NumCopies \@pdfnumcopies
8782   \fi
8783 >>>}%
8784 \ifx\@pdfpagelayout\@empty
8785 \else
8786   \special{!pdfinfo l=</\@pdfpagelayout\space>}%
8787 \fi
8788 }%
8789 \def\PDF@FinishDoc{%
8790   \Hy@UseMaketitleInfos
8791   \special{!pdfinfo a=<\@pdfauthor>}%
8792   \special{!pdfinfo t=<\@pdftitle>}%
8793   \special{!pdfinfo s=<\@pdfsubject>}%
8794   \special{!pdfinfo c=<\@pdfcreator>}%
8795   \ifx\@pdfproducer\relax
8796   \else
8797     \special{!pdfinfo r=<\@pdfproducer>}%

```

```

8798 \fi
8799 \special{!pdfinfo k=<\pdfkeywords>}%
8800 \Hy@DisableOption{pdfauthor}%
8801 \Hy@DisableOption{pdftitle}%
8802 \Hy@DisableOption{pdfsubject}%
8803 \Hy@DisableOption{pdfcreator}%
8804 \Hy@DisableOption{pdfcreationdate}%
8805 \Hy@DisableOption{pdfmoddate}%
8806 \Hy@DisableOption{pdfproducer}%
8807 \Hy@DisableOption{pdfkeywords}%
8808 }
8809 </vtex>

```

46.7 Fix for Adobe bug number 466320

If a destination occurs at the very begin of a page, the destination is moved to the previous page by Adobe Distiller 5. As workaround Adobe suggests:

```

/showpage {
  //showpage
  clippath stroke erasepage
} bind def

```

But unfortunately this fix generates an empty page at the end of the document. Therefore another fix is used by writing some clipped text.

```

8810 <dviwindo>\def\literalps@out#1{\special{ps:#1}}%
8811 <package>\providecommand*{\Hy@DistillerDestFix}{}
8812 <*pdfmark | dviwindo>
8813 \def\Hy@DistillerDestFix{%
8814   \begingroup
8815     \let\x\literalps@out

```

The fix has to be passed unchanged through GeX, if VTeX in PostScript mode with GeX is used.

```

8816   \ifnum \@ifundefined{OpMode}{0}{}%
8817     \@ifundefined{gexmode}{0}{}%
8818     \ifnum\gexmode>0 \OpMode\else 0\fi
8819   }>1 %
8820   \def\x##1{%
8821     \immediate\special{! =##1}%
8822   }%
8823   \fi
8824   \x{%
8825     /product where{%
8826       pop %
8827       product(Distiller)search{%
8828         pop pop pop %
8829         version(.)search{%
8830           exch pop exch pop%
8831           (3011)eq{%
8832             gsave %
8833             newpath 0 0 moveto closepath clip%
8834             /Courier findfont 10 scalefont setfont %
8835             72 72 moveto(.)show %
8836             grestore%
8837           }if%
8838         }{pop}ifelse%
8839       }{pop}ifelse%

```

```

8840     }if%
8841   }%
8842 \endgroup
8843 }
8844 </pdfmark | dviwindo>

```

46.8 Direct pdfmark support

Drivers that load `pdfmark.def` have to provide the correct macro definitions of

<code>\@pdfproducer</code>	for document information
<code>\literalps@out</code>	PostScript output
<code>\headerps@out</code>	PostScript output that goes in the header area

and the correct definitions of the following PostScript procedures:

<code>H.S</code>	start of anchor, link or rect
<code>#1 H.A</code>	end of anchor, argument=baselineskip in pt
<code>#1 H.L</code>	end of link, argument=baselineskip in pt
<code>H.R</code>	end of rect
<code>H.B</code>	raw rect code

```

8845 <*pdfmark>
8846 \Hy@breaklinks@unsupported
8847 \def\hyper@anchor#1{%
8848   \Hy@SaveLastskip
8849   \begingroup
8850     \pdfmark[\anchor@spot]{%
8851       pdfmark=/DEST,%
8852       linktype=anchor,%
8853       View=/\@pdfview \@pdfviewparams,%
8854       DestAnchor={#1}%
8855     }%
8856 \endgroup
8857 \Hy@RestoreLastskip
8858 }
8859 \@ifundefined{hyper@anchorstart}{-}{\endinput}
8860 \def\hyper@anchorstart#1{%
8861   \Hy@SaveLastskip
8862   \literalps@out{H.S}%
8863   \xdef\hyper@currentanchor{#1}%
8864   \Hy@activeanchortrue
8865 }
8866 \def\hyper@anchorend{%
8867   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.A}%
8868   \pdfmark{%
8869     pdfmark=/DEST,%
8870     linktype=anchor,%
8871     View=/\@pdfview \@pdfviewparams,%
8872     DestAnchor=\hyper@currentanchor,%
8873   }%
8874   \Hy@activeanchorfalse
8875   \Hy@RestoreLastskip
8876 }
8877 \def\hyper@linkstart#1#2{%
8878   \ifHy@breaklinks
8879   \else
8880     \leavevmode\hbox\bgroup

```



```

8881 \fi
8882 \expandafter\Hy@colorlink\csname @#1color\endcsname
8883 \literalps@out{H.S}%
8884 \xdef\hyper@currentanchor{#2}%
8885 \gdef\hyper@currentlinktype{#1}%
8886 }
8887 \def\hyper@linkend{%
8888 \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.L}%
8889 \@ifundefined{@\hyper@currentlinktype bordercolor}{%
8890 \let\Hy@tempcolor\relax
8891 }{%
8892 \edef\Hy@tempcolor{%
8893 \csname @\hyper@currentlinktype bordercolor\endcsname
8894 }%
8895 }%
8896 \pdfmark{%
8897 pdfmark=/ANN,%
8898 linktype=link,%
8899 Subtype=/Link,%
8900 PDFAFlags=4,%
8901 Dest=\hyper@currentanchor,%
8902 AcroHighlight=\@pdfhighlight,%
8903 Border=\@pdfborder,%
8904 BorderStyle=\@pdfborderstyle,%
8905 Color=\Hy@tempcolor,%
8906 Raw=H.B%
8907 }%
8908 \Hy@endcolorlink
8909 \ifHy@breaklinks
8910 \else
8911 \egroup
8912 \fi
8913 }

```

We have to allow for \baselineskip having an optional stretch and shrink (you meet this in slide packages, for instance), so we need to strip off the junk. David Carlisle, of course, wrote this bit of code.

```

8914 \begingroup
8915 \catcode'P=12 %
8916 \catcode'T=12 %
8917 \lowercase{\endgroup
8918 \gdef\rem@ptetc#1.#2PT#3!{#1\ifnum#2>\z@.#2\fi}%
8919 }
8920 \def\strip@pt@and@otherjunk#1{\expandafter\rem@ptetc\the#1!}

```

\hyper@pagetransition

```

8921 \def\hyper@pagetransition{%
8922 \ifx\@pdfpagetransition\relax
8923 \else
8924 \ifx\@pdfpagetransition\@empty
8925 % 1. Does an old entry have to be deleted?
8926 % 2. If 1=yes, how to delete?
8927 \else
8928 \pdfmark{%
8929 pdfmark=/PUT,%
8930 Raw={%
8931 \string{ThisPage\string}%

```

```

8932         <</Trans << /S /\@pdfpagetransition\space >> >>%
8933     }%
8934 }%
8935 \fi
8936 \fi
8937 }

```

\hyper@pageduration

```

8938 \def\hyper@pageduration{%
8939   \ifx\@pdfpageduration\relax
8940   \else
8941     \ifx\@pdfpageduration\@empty
8942       % 1. Does an old entry have to be deleted?
8943       % 2. If 1=yes, how to delete?
8944     \else
8945       \pdfmark{%
8946         pdfmark=/PUT,%
8947         Raw={%
8948           \string{ThisPage\string}%
8949           <</Dur \@pdfpageduration>>%
8950         }%
8951       }%
8952     \fi
8953   \fi
8954 }

```

\hyper@pagehidden

```

8955 \def\hyper@pagehidden{%
8956   \ifHy@useHidKey
8957     \pdfmark{%
8958       pdfmark=/PUT,%
8959       Raw={%
8960         \string{ThisPage\string}%
8961         <</Hid \ifHy@pdfpagehidden true\else false\fi>>%
8962       }%
8963     }%
8964   \fi
8965 }

```

```

8966 \g@addto@macro\Hy@EveryPageBoxHook{%
8967   \hyper@pagetransition
8968   \hyper@pageduration
8969   \hyper@pagehidden
8970 }

```

```

8971 \def\hyper@image#1#2{%
8972   \hyper@linkurl{#2}{#1}%
8973 }
8974 \def\Hy@undefinedname{UNDEFINED}
8975 \def\hyper@link#1#2#3{%
8976   \@ifundefined{#1bordercolor}{%
8977     \let\Hy@tempcolor\relax
8978   }{%
8979     \edef\Hy@tempcolor{\csname #1bordercolor\endcsname}%
8980   }%
8981   \begingroup
8982     \protected@edef\Hy@testname{#2}%
8983     \ifx\Hy@testname\@empty

```

```

8984     \Hy@Warning{%
8985         Empty destination name,\MessageBreak
8986         using '\Hy@undefinedname'%
8987     }%
8988     \let\Hy@testname\Hy@undefinedname
8989 \fi
8990 \pdfmark[#{3}]{%
8991     Color=\Hy@tempcolor,%
8992     linktype=#{1},%
8993     AcroHighlight=\@pdfhighlight,%
8994     Border=\@pdfborder,%
8995     BorderStyle=\@pdfborderstyle,%
8996     pdfmark=/ANN,%
8997     Subtype=/Link,%
8998     PDFAFlags=4,%
8999     Dest=\Hy@testname
9000 }%
9001 \endgroup
9002 }
9003 \newtoks\pdf@docset
9004 \def\PDF@FinishDoc{%
9005     \Hy@UseMaketitleInfos
9006     \let\Hy@temp\@empty
9007     \ifx\@pdfcreationdate\@empty
9008     \else
9009         \def\Hy@temp{CreationDate=\@pdfcreationdate,}%
9010     \fi
9011     \ifx\@pdfmoddate\@empty
9012     \else
9013         \expandafter\def\expandafter\Hy@temp\expandafter{%
9014             \Hy@temp
9015             ModDate=\@pdfmoddate,%
9016         }%
9017     \fi
9018     \ifx\@pdfproducer\relax
9019     \else
9020         \expandafter\def\expandafter\Hy@temp\expandafter{%
9021             \Hy@temp
9022             Producer=\@pdfproducer,%
9023         }%
9024     \fi
9025     \expandafter
9026     \pdfmark\expandafter{%
9027         \Hy@temp
9028         pdfmark=/DOCINFO,%
9029         Title=\@pdftitle,%
9030         Subject=\@pdfsubject,%
9031         Creator=\@pdfcreator,%
9032         Author=\@pdfauthor,%
9033         Keywords=\@pdfkeywords
9034     }%
9035     \Hy@DisableOption{pdfauthor}%
9036     \Hy@DisableOption{pdftitle}%
9037     \Hy@DisableOption{pdfsubject}%
9038     \Hy@DisableOption{pdfcreator}%
9039     \Hy@DisableOption{pdfcreationdate}%
9040     \Hy@DisableOption{pdfmoddate}%

```

```

9041 \Hy@DisableOption{pdfproducer}%
9042 \Hy@DisableOption{pdfkeywords}%
9043 }
9044 \def\PDF@SetupDoc{%
9045 \def\Hy@temp{%
9046 \ifx\@pdfstartpage\@empty
9047 \else
9048 \ifx\@pdfstartview\@empty
9049 \else
9050 \edef\Hy@temp{%
9051 ,Page=\@pdfstartpage
9052 ,View=\@pdfstartview
9053 }%
9054 \fi
9055 \fi
9056 \edef\Hy@temp{%
9057 \noexpand\pdfmark{%
9058 pdfmark=/DOCVIEW,%
9059 PageMode=/\@pdfpagemode
9060 \Hy@temp
9061 }%
9062 }%
9063 \Hy@temp
9064 \ifx\@pdfpagescrop\@empty
9065 \else
9066 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
9067 \fi
9068 \edef\Hy@temp{%
9069 \ifHy@toolbar\else /HideToolbar true\fi
9070 \ifHy@menubar\else /HideMenubar true\fi
9071 \ifHy@windowui\else /HideWindowUI true\fi
9072 \ifHy@fitwindow /FitWindow true\fi
9073 \ifHy@centerwindow /CenterWindow true\fi
9074 \ifHy@displaydoctitle /DisplayDocTitle true\fi
9075 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9076 \Hy@UseNameKey{Direction}\@pdfdirection
9077 \Hy@UseNameKey{ViewArea}\@pdfviewarea
9078 \Hy@UseNameKey{ViewClip}\@pdfviewclip
9079 \Hy@UseNameKey{PrintArea}\@pdfprintarea
9080 \Hy@UseNameKey{PrintClip}\@pdfprintclip
9081 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9082 \Hy@UseNameKey{Duplex}\@pdfduplex
9083 \ifx\@pdfpicktraybypdfsize\@empty
9084 \else
9085 /PickTrayByPDFSize \@pdfpicktraybypdfsize
9086 \fi
9087 \ifx\@pdfprintpagerange\@empty
9088 \else
9089 /PrintPageRange[\@pdfprintpagerange]%
9090 \fi
9091 \ifx\@pdfnumcopies\@empty
9092 \else
9093 /NumCopies \@pdfnumcopies
9094 \fi
9095 }%
9096 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
9097 \pdfmark{%

```

```

9098 pdfmark=/PUT,%
9099 Raw={%
9100   \string{Catalog\string}<<%
9101     \ifx\Hy@temp\@empty
9102     \else
9103       /ViewerPreferences<<\Hy@temp>>%
9104     \fi
9105     \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9106     \ifx\@pdflang\@empty
9107     \else
9108       /Lang(\@pdflang)%
9109     \fi
9110     \ifx\@baseurl\@empty
9111     \else
9112       /URI<</Base(\Hy@pstringB)>>%
9113     \fi
9114   >>%
9115 }%
9116 }%
9117 }
9118 </pdfmark>
9119 <*pdfmarkbase>

```

We define a single macro, pdfmark, which uses the ‘keyval’ system to define the various allowable keys; these are *exactly* as listed in the pdfmark reference for Acrobat 3.0. The only addition is pdfmark which specifies the type of pdfmark to create (like ANN, LINK etc). The surrounding round and square brackets in the pdfmark commands are supplied, but you have to put in / characters as needed for the values.

```

9120 \newif\ifHy@pdfmarkerror
9121 \def\pdfmark{\@ifnextchar [{\pdfmark@}{\pdfmark@[]}}
9122 \def\pdfmark@[#1]#2{%
9123   \Hy@pdfmarkerrorfalse
9124   \edef\@processme{\noexpand\pdf@toks={\the\pdf@defaulttoks}}%
9125   \@processme
9126   \let\pdf@type\relax
9127   \setkeys{PDF}{#2}%
9128   \ifHy@pdfmarkerror
9129   \else
9130     \ifx\pdf@type\relax
9131       \Hy@WarningNoLine{no pdfmark type specified in #2!!}%
9132       \ifx\#1\%
9133       \else
9134         \pdf@rect{#1}%
9135       \fi
9136     \else
9137       \ifx\#1\%
9138         \literalps@out{%
9139           [\the\pdf@toks\space\pdf@type\space pdfmark%
9140         ]%
9141       \else
9142         \@ifundefined{@\pdf@linktype color}{%
9143           \Hy@colorlink\@linkcolor
9144         }{%
9145           \expandafter\Hy@colorlink
9146             \csname @\pdf@linktype color\endcsname
9147         }%
9148         \pdf@rect{#1}%

```

```

9149         \literalps@out{%
9150         [\the\pdf@toks\space\pdf@type\space pdfmark%
9151         }%
9152         \Hy@endcolorlink
9153     \fi
9154 \fi
9155 \fi
9156 }

```

The complicated bit is working out the right enclosing rectangle of some piece of TeX text, needed by the /Rect key. This solution originates with Toby Thain (tobythain@netspace.net.au).

For the case breaklinks is enabled, I have added two hooks, the first one for package setouterhbox, it provides a hopefully better method without setting the text twice.

```
\usepackage[hyperref]{setouterhbox}
```

With the second hook, also you can set the text twice, e.g.:

```

\long\def\Hy@setouterhbox#1#2{\long\def\my@temp{#2}}
\def\Hy@breaklinksunhbox#1{\my@temp}

```

```

9157 \newsavebox{\pdf@box}
9158 \providecommand*{\Hy@setouterhbox}{\sbox}
9159 \providecommand*{\Hy@breaklinksunhbox}{\unhbox}
9160 \def\Hy@DEST{/DEST}
9161 \def\pdf@rect#1{%
9162     \leavevmode
9163     \ifHy@breaklinks
9164         \Hy@setouterhbox\pdf@box{#1}%
9165     \else
9166         \sbox\pdf@box{#1}%
9167     \fi
9168     \dimen@ht\pdf@box
9169     \ifdim\dp\pdf@box=\z@
9170         \literalps@out{H.S}%
9171     \else
9172         \lower\dp\pdf@box\hbox{\literalps@out{H.S}}%
9173     \fi

```

If the text has to be horizontal mode stuff then just unbox the saved box like this, which saves executing it twice, which can mess up counters etc (thanks DPC...).

```

9174     \ifHy@breaklinks
9175         \expandafter\Hy@breaklinksunhbox
9176     \else
9177         \expandafter\box
9178     \fi
9179     \pdf@box

```

but if it can have multiple paragraphs you'd need one of these, but in that case the measured box size would be wrong anyway.

```

\ifHy@breaklinks#1\else\box\pdf@box\fi
\ifHy@breaklinks{#1}\else\box\pdf@box\fi

9180 \ifdim\dimen@=\z@
9181     \literalps@out{H.R}%
9182 \else
9183     \raise\dimen@\hbox{\literalps@out{H.R}}%
9184 \fi
9185 \ifx\pdf@type\Hy@DEST

```

```

9186 \else
9187     \pdf@addtoksx{H.B}%
9188 \fi
9189 }

```

All the supplied material is stored in a token list; since I do not feel sure I quite understand these, things may not work as expected with expansion. We'll have to experiment.

```

9190 \newtoks\pdf@toks
9191 \newtoks\pdf@defaulttoks
9192 \pdf@defaulttoks={}
9193 \def\pdf@addtoks#1#2{%
9194     \edef\@processme{\pdf@toks{\the\pdf@toks/#2 #1}}%
9195     \@processme
9196 }
9197 \def\pdf@addtoksx#1{%
9198     \edef\@processme{\pdf@toks{\the\pdf@toks\space #1}}%
9199     \@processme
9200 }
9201 \def\PDFdefaults#1{%
9202     \pdf@defaulttoks={#1}%
9203 }

```

This is the list of allowed keys. See the Acrobat manual for an explanation.

```

9204 % what is the type of pdfmark?
9205 \define@key{PDF}{pdfmark}{\def\pdf@type{#1}}
9206 % what is the link type?
9207 \define@key{PDF}{linktype}{\def\pdf@linktype{#1}}
9208 \def\pdf@linktype{link}
9209 % parameter is a stream of PDF
9210 \define@key{PDF}{Raw}{\pdf@addtoksx{#1}}
9211 % parameter is a name
9212 \define@key{PDF}{Action}{\pdf@addtoks{#1}{Action}}
9213 % parameter is a array
9214 \define@key{PDF}{Border}{%
9215     \edef\Hy@temp{#1}%
9216     \ifx\Hy@temp\@empty
9217     \else
9218         \pdf@addtoks{[#1]\Hy@BorderArrayPatch}{Border}% hash-ok
9219     \fi
9220 }
9221 \let\Hy@BorderArrayPatch\@empty
9222 % parameter is a dictionary
9223 \define@key{PDF}{BorderStyle}{%
9224     \edef\Hy@temp{#1}%
9225     \ifx\Hy@temp\@empty
9226     \else
9227         \pdf@addtoks{<<#1>>}{BS}%
9228     \fi
9229 }
9230 % parameter is a array
9231 \define@key{PDF}{Color}{%
9232     \ifx\relax#1\relax
9233     \else
9234         \pdf@addtoks{[#1]}{Color}% hash-ok
9235     \fi
9236 }
9237 % parameter is a string
9238 \define@key{PDF}{Contents}{\pdf@addtoks{(#1)}{Contents}}

```

```

9239 % parameter is a integer
9240 \define@key{PDF}{Count}{\pdf@addtoks{#1}{Count}}
9241 % parameter is a array
9242 \define@key{PDF}{CropBox}{\pdf@addtoks{[#1]}{CropBox}}% hash-ok
9243 % parameter is a string
9244 \define@key{PDF}{DOSFile}{\pdf@addtoks{(#1)}{DOSFile}}
9245 % parameter is a string or file
9246 \define@key{PDF}{DataSource}{\pdf@addtoks{(#1)}{DataSource}}
9247 % parameter is a destination
9248 \define@key{PDF}{Dest}{%
9249   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
9250   \ifx\Hy@pstringDest@empty
9251     \Hy@pdfmarkerrortrue
9252     \Hy@Warning{Destination with empty name ignored}%
9253   \else
9254     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
9255   \fi
9256 }
9257 \define@key{PDF}{DestAnchor}{%
9258   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
9259   \ifx\Hy@pstringDest@empty
9260     \Hy@pdfmarkerrortrue
9261     \Hy@Warning{Destination with empty name ignored}%
9262   \else
9263     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
9264   \fi
9265 }
9266 % parameter is a string
9267 \define@key{PDF}{Dir}{\pdf@addtoks{(#1)}{Dir}}
9268 % parameter is a string
9269 \define@key{PDF}{File}{\pdf@addtoks{(#1)}{File}}
9270 % parameter is a int
9271 \define@key{PDF}{Flags}{\pdf@addtoks{#1}{Flags}}
9272 \define@key{PDF}{PDFAFlags}{%
9273   \ifHy@pdfa
9274     \pdf@addtoks{#1}{F}%
9275   \fi
9276 }
9277 % parameter is a name
9278 \define@key{PDF}{AcroHighlight}{%
9279   \begingroup
9280     \edef\x{#1}%
9281     \expandafter\endgroup\ifx\x@empty
9282   \else
9283     \pdf@addtoks{#1}{H}%
9284   \fi
9285 }
9286 % parameter is a string
9287 \define@key{PDF}{ID}{\pdf@addtoks{[#1]}{ID}}% hash-ok
9288 % parameter is a string
9289 \define@key{PDF}{MacFile}{\pdf@addtoks{(#1)}{MacFile}}
9290 % parameter is a string
9291 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
9292 % parameter is a string
9293 \define@key{PDF}{Op}{\pdf@addtoks{(#1)}{Op}}
9294 % parameter is a Boolean
9295 \define@key{PDF}{Open}{\pdf@addtoks{#1}{Open}}

```



```

9296 % parameter is a integer or name
9297 \define@key{PDF}{Page}{\pdf@addtoks{#1}{Page}}
9298 % parameter is a name
9299 \define@key{PDF}{PageMode}{\pdf@addtoks{#1}{PageMode}}
9300 % parameter is a string
9301 \define@key{PDF}{Params}{\pdf@addtoks{#1}{Params}}
9302 % parameter is a array
9303 \define@key{PDF}{Rect}{\pdf@addtoks{#1}{Rect}}% hash-ok
9304 % parameter is a integer
9305 \define@key{PDF}{SrcPg}{\pdf@addtoks{#1}{SrcPg}}
9306 % parameter is a name
9307 \define@key{PDF}{Subtype}{\pdf@addtoks{#1}{Subtype}}
9308 % parameter is a string
9309 \define@key{PDF}{Title}{\pdf@addtoks{#1}{Title}}
9310 % parameter is a string
9311 \define@key{PDF}{Unix}{\pdf@addtoks{#1}{Unix}}
9312 % parameter is a string
9313 \define@key{PDF}{UnixFile}{\pdf@addtoks{#1}{UnixFile}}
9314 % parameter is an array
9315 \define@key{PDF}{View}{\pdf@addtoks{#1}{View}}% hash-ok
9316 % parameter is a string
9317 \define@key{PDF}{WinFile}{\pdf@addtoks{#1}{WinFile}}

```

These are the keys used in the DOCINFO section.

```

9318 \define@key{PDF}{Author}{\pdf@addtoks{#1}{Author}}
9319 \define@key{PDF}{Creator}{\pdf@addtoks{#1}{Creator}}
9320 \define@key{PDF}{CreationDate}{\pdf@addtoks{#1}{CreationDate}}
9321 \define@key{PDF}{ModDate}{\pdf@addtoks{#1}{ModDate}}
9322 \define@key{PDF}{Producer}{\pdf@addtoks{#1}{Producer}}
9323 \define@key{PDF}{Subject}{\pdf@addtoks{#1}{Subject}}
9324 \define@key{PDF}{Keywords}{\pdf@addtoks{#1}{Keywords}}
9325 \define@key{PDF}{ModDate}{\pdf@addtoks{#1}{ModDate}}
9326 \define@key{PDF}{Base}{\pdf@addtoks{#1}{Base}}
9327 \define@key{PDF}{URI}{\pdf@addtoks{#1}{URI}}
9328 </pdfmarkbase>
9329 <*pdfmark>
9330 \def\Acrobatmenu#1#2{%
9331   \Hy@Acrobatmenu{#1}{#2}{%
9332     \pdfmark[{#2}]{%
9333       linktype=menu,%
9334       pdfmark=/ANN,%
9335       AcroHighlight=\pdfhighlight,%
9336       Border=\pdfborder,%
9337       BorderStyle=\pdfborderstyle,%
9338       Action={<< /Subtype /Named /N /#1 >>},%
9339       Subtype=/Link,%
9340       PDFAMFlags=4%
9341     }%
9342   }%
9343 }

```

And now for some useful examples:

```

9344 \def\PDFNextPage{\@ifnextchar[{\PDFNextPage@}{\PDFNextPage@[]}}
9345 \def\PDFNextPage@[#1]#2{%
9346   \pdfmark[{#2}]{%
9347     #1,%
9348     Border=\pdfborder,%
9349     BorderStyle=\pdfborderstyle,%

```

```

9350     Color=.2 .1 .5,%
9351     pdfmark=/ANN,%
9352     Subtype=/Link,%
9353     PDFAFlags=4,%
9354     Page=/Next%
9355 }%
9356 }
9357 \def\PDFPreviousPage{%
9358   \@ifnextchar[{\PDFPreviousPage@}{\PDFPreviousPage@[]}%
9359 }
9360 \def\PDFPreviousPage@[#1]#2{%
9361   \pdfmark[#{#2}]{%
9362     #1,%
9363     Border=\pdfborder,%
9364     BorderStyle=\pdfborderstyle,%
9365     Color=.4 .4 .1,%
9366     pdfmark=/ANN,%
9367     Subtype=/Link,%
9368     PDFAFlags=4,%
9369     Page=/Prev%
9370 }%
9371 }
9372 \def\PDFOpen#1{%
9373   \pdfmark{#1,pdfmark=/DOCVIEW}%
9374 }

```

This will only work if you use Distiller 2.1 or higher.

```

9375 \def\hyper@linkurl#1#2{%
9376   \begingroup
9377     \Hy@pstringdef\Hy@pstringURI{#2}%
9378     \hyper@chars
9379     \leavevmode
9380     \pdfmark[#{#1}]{%
9381       pdfmark=/ANN,%
9382       linktype=url,%
9383       AcroHighlight=\pdfhighlight,%
9384       Border=\pdfborder,%
9385       BorderStyle=\pdfborderstyle,%
9386       Color=\urlbordercolor,%
9387       Action={<< /Subtype /URI /URI (\Hy@pstringURI) >>},%
9388       Subtype=/Link,%
9389       PDFAFlags=4%
9390     }%
9391   \endgroup
9392 }
9393 \def\hyper@linkfile#1#2#3{%
9394   \begingroup
9395     \Hy@pstringdef\Hy@pstringF{#2}%
9396     \Hy@pstringdef\Hy@pstringD{#3}%
9397     \leavevmode
9398     \pdfmark[#{#1}]{%
9399       pdfmark=/ANN,%
9400       Subtype=/Link,%
9401       PDFAFlags=4,%
9402       AcroHighlight=\pdfhighlight,%
9403       Border=\pdfborder,%
9404       BorderStyle=\pdfborderstyle,%
9405       linktype=file,%

```

```

9406     Color=\@filebordercolor,%
9407     Action={%
9408         <<%
9409             /S/GoToR%
9410             \Hy@SetNewWindow
9411             /F(\Hy@pstringF)%
9412             /D\ifx\#3\[/O \@pdfstartview]\else(\Hy@pstringD)cvn\fi
9413         >>%
9414     }%
9415 }%
9416 \endgroup
9417 }
9418 \def\@hyper@launch run:#1\#2#3{%
9419     \begingroup
9420     \Hy@pstringdef\Hy@pstringF{#1}%
9421     \Hy@pstringdef\Hy@pstringP{#3}%
9422     \leavevmode
9423     \pdfmark[{#2}]{%
9424         pdfmark=/ANN,%
9425         Subtype=/Link,%
9426         PDFAFlags=4,%
9427         AcroHighlight=\@pdfhighlight,%
9428         Border=\@pdfborder,%
9429         BorderStyle=\@pdfborderstyle,%
9430         linktype=run,%
9431         Color=\@runbordercolor,%
9432         Action={%
9433             <<%
9434                 /S/Launch%
9435                 \Hy@SetNewWindow
9436                 /F(\Hy@pstringF)%
9437                 \ifx\#3\%
9438                 \else
9439                     /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
9440                 \fi
9441             >>%
9442         }%
9443     }%
9444 \endgroup
9445 }
9446 \pdfmark

```

Unfortunately, some parts of the pdfmark PostScript code depend on vagaries of the dvi driver. We isolate here all the problems.

46.9 Rokicki's dvips

dvips thinks in 10ths of a big point, its coordinate space is resolution dependent, and its *y* axis starts at the top of the page. Other drivers can and will be different!

The work is done in SDict, because we add in some header definitions in a moment.

```

9447 < *dvips>
9448 \providecommand*\XR@ext}{pdf}
9449 \def\Hy@raisedlink{}
9450 \def\literalps@out#1{\special{ps:SDict begin #1 end}}%
9451 \def\headerps@out#1{\special{! #1}}%
9452 \input{pdfmark.def}%
9453 \ifx\@pdfproducer\relax

```

```

9454 \def\pdfproducer{dvips + Distiller}%
9455 \fi
9456 \providecommand*\pdfborder{0 0 1}
9457 \providecommand*\pdfborderstyle{}
9458 \providecommand*\pdfview{XYZ}
9459 \providecommand*\pdfviewparams{ H.V}
9460 \def\Hy@BorderArrayPatch{BorderArrayPatch}

9461 \g@addto@macro\Hy@FirstPageHook{%
9462   \headerps@out{%

```

Unless I am going mad, this *appears* to be the relationship between the default coordinate system (PDF), and dvips;

```

/DvipsToPDF { .01383701 div Resolution div } def
/PDFToDvips { .01383701 mul Resolution mul } def

```

the latter's coordinates are resolution dependent, but what that .01383701 is, who knows? well, almost everyone except me, I expect... And yes, Maarten Gelderman <mgelderman@econ.vu.nl> points out that its 1/72.27 (the number of points to an inch, big points to inch is 1/72). This also suggests that the code would be more understandable (and exact) if 0.013 div would be replaced by 72.27 mul, so here we go. If this isn't right, I'll revert it.

```

9463   /DvipsToPDF{72.27 mul Resolution div} def%
9464   /PDFToDvips{72.27 div Resolution mul} def%
9465   /BPToDvips{72 div Resolution mul}def%

```

The values inside the /Boder array are not taken literally, but interpreted by ghostscript using the resolution of the dvi driver. I don't know how other distiller programs behaves in this manner.

```

9466   /BorderArrayPatch{%
9467     [exch%
9468       dup dup type/integertype eq exch type/realtype eq or%
9469       {BPToDvips}if%
9470     ]forall}%
9471   }def%

```

The rectangle around the links starts off *exactly* the size of the box; we will to make it slightly bigger, 1 point on all sides.

```

9472   /HyperBorder {1 PDFToDvips} def%
9473   /H.V {pdf@hoff pdf@voff null} def%
9474   /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def%

```

H.S (start of anchor, link, or rect) stores the *x* and *y* coordinates of the current point, in PDF coordinates

```

9475   /H.S {%
9476     currentpoint %
9477     HyperBorder add /pdf@lly exch def %
9478     dup DvipsToPDF 72 add /pdf@hoff exch def %
9479     HyperBorder sub /pdf@llx exch def%
9480   } def%

```

The calculation of upper left *y* is done without raising the point in T_EX, by simply adding on the current \baselineskip to the current *y*. This is usually too much, so we remove a notional 2 points.

We have to see what the current baselineskip is, and convert it to the dvips coordinate system.

Argument: baselineskip in pt. The x and y coordinates of the current point, minus the baselineskip

```

9481 /H.L {%
9482 2 sub dup%
9483 /HyperBasePt exch def %
9484 PDFToDvips /HyperBaseDvips exch def %
9485 currentpoint %
9486 HyperBaseDvips sub /pdf@ury exch def%
9487 /pdf@urx exch def%
9488 } def%
9489 /H.A {%
9490 H.L %
9491 % | /pdf@voff| = the distance from the top of the page to a point
9492 % | \baselineskip| above the current point in PDF coordinates
9493 currentpoint exch pop %
9494 vsize 72 sub exch DvipsToPDF %
9495 HyperBasePt sub % baseline skip
9496 sub /pdf@voff exch def%
9497 } def%
9498 /H.R {%
9499 currentpoint %
9500 HyperBorder sub /pdf@ury exch def %
9501 HyperBorder add /pdf@urx exch def %
9502 % | /pdf@voff| = the distance from the top of the page to the current point, in
9503 % PDF coordinates
9504 currentpoint exch pop vsize 72 sub %
9505 exch DvipsToPDF sub /pdf@voff exch def%
9506 } def%
9507 }%
9508 }
9509 \AfterBeginDocument{%
9510 \ifx\special@paper\@empty\else
9511 \ifHy@setpagesize
9512 \special{papersize=\special@paper}%
9513 \fi
9514 \fi
9515 \Hy@DisableOption{setpagesize}%
9516 }
9517 </dvips>

```

46.10 VTeX's vtexpdfmark driver

This part is derived from the dvips (many names reflect this).

The origin seems to be the same as TeX's origin, 1 in from the left and 1 in downwards from the top. The direction of the y axis is downwards, the opposite of the dvips case. Units seems to be pt or bp.

```

9518 <*vtexpdfmark>
9519 \providecommand*{\XR@ext}{pdf}
9520 \def\Hy@raisedlink{}
9521 \def\literalps@out#1{\special{pS:#1}}%
9522 \def\headerps@out#1{\immediate\special{pS:#1}}%
9523 \input{pdfmark.def}%
9524 \ifx\@pdfproducer\relax
9525 \ifnum\OpMode=\@ne
9526 \def\@pdfproducer{VTeX}%
9527 \else

```

```

9528 \def\pdfproducer{VTeX + Distiller}%
9529 \fi
9530 \fi
9531 \providecommand*\pdfborder{0 0 1}
9532 \providecommand*\pdfborderstyle{}
9533 \providecommand*\pdfview{XYZ}
9534 \providecommand*\pdfviewparams{ H.V}

9535 \g@addto@macro\Hy@FirstPageHook{%
9536 \headerps@out{%
9537 /vsize {\Hy@pageheight} def%

```

The rectangle around the links starts off *exactly* the size of the box; we will to make it slightly bigger, 1 point on all sides.

```

9538 /HyperBorder {1} def%
9539 /H.V {pdf@hoff pdf@voff null} def%
9540 /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def%

```

H.S (start of anchor, link, or rect) stores the x and y coordinates of the current point, in PDF coordinates: $\text{pdf@lly} = Y_c - \text{HyperBorder}$, $\text{pdf@hoff} = X_c + 72$, $\text{pdf@llx} = X_c - \text{HyperBorder}$

```

9541 /H.S {%
9542 currentpoint %
9543 HyperBorder sub%
9544 /pdf@lly exch def %
9545 dup 72 add /pdf@hoff exch def %
9546 HyperBorder sub%
9547 /pdf@llx exch def%
9548 } def%

```

The x and y coordinates of the current point, minus the `\baselineskip`: $\text{pdf@ury} = Y_c + \text{HyperBasePt} + \text{HyperBorder}$, $\text{pdf@urx} = X_c + \text{HyperBorder}$

```

9549 /H.L {%
9550 2 sub%
9551 /HyperBasePt exch def %
9552 currentpoint %
9553 HyperBasePt add HyperBorder add%
9554 /pdf@ury exch def %
9555 HyperBorder add%
9556 /pdf@urx exch def%
9557 } def%
9558 /H.A {%
9559 H.L %
9560 currentpoint exch pop %
9561 vsize 72 sub exch %
9562 HyperBasePt add add%
9563 /pdf@voff exch def%
9564 } def%

```

$\text{pdf@ury} = Y_c + \text{HyperBorder}$, $\text{pdf@urx} = X_c + \text{HyperBorder}$

```

9565 /H.R {%
9566 currentpoint %
9567 HyperBorder add%
9568 /pdf@ury exch def %
9569 HyperBorder add%
9570 /pdf@urx exch def %
9571 currentpoint exch pop vsize 72 sub add%
9572 /pdf@voff exch def%
9573 } def%

```

```

9574 }%
9575 }
9576 \vtxpdfmark>

```

46.11 Textures

```

9577 <*textures>
9578 \providecommand*{\XR@ext}{pdf}

```

At the suggestion of Jacques Distler (distler@golem.ph.utexas.edu), try to derive a suitable driver for Textures. This was initially a copy of dvips, with some guesses about Textures behaviour. Ross Moore (ross@maths.mq.edu.au) has added modifications for better compatibility, and to support use of pdfmark.

Start by defining a macro that expands to the end-of-line character. This will be used to format the appearance of PostScript code, to enhance readability, and avoid excessively long lines which might otherwise become broken to bad places.

\Hy@ps@CR The macro \Hy@ps@CR contains the end-of-line character.

```

9579 \begingroup
9580 \obeylines %
9581 \gdef\Hy@ps@CR{\noexpand
9582 }%
9583 \endgroup %

```

Textures has two types of \special command for inserting PostScript code directly into the dvi output. The ‘postscript’ way preserves TeX’s idea of where on the page the \special occurred, but it wraps the contents with a save–restore pair, and adjusts the user-space coordinate system for local drawing commands. The ‘rawpostscript’ way simply inserts code, without regard for the location on the page.

Thus, to put arbitrary PostScript coding at a fixed location requires using *both* \special constructions. It works by pushing the device-space coordinates onto the operand stack, where they can be used to transform back to the correct user-space coordinates for the whole page, within a ‘rawpostscript’ \special.

```

9584 \def\literalps@out#1{%
9585 \special{postscript 0 0 transform}%
9586 \special{rawpostscript itransform moveto\Hy@ps@CR #1}%
9587 }%
9588 %

```

The ‘prepostscript’ is a 3rd kind of \special, used for inserting definitions into the dictionaries, before page-building begins. These are to be available for use on all pages.

```

9589 \def\headerps@out#1{%
9590 \special{%
9591 prepostscript TeXdict begin\Hy@ps@CR
9592 #1\Hy@ps@CR
9593 end%
9594 }%
9595 }%
9596 %

```

To correctly support the pdfmark method, for embedding PDF definitions with .ps files in a non-intrusive way, an appropriate definition needs to be made *before* the file pdfmark.def is read. Other parameters are best set afterwards.

```

9597 \g@addto@macro\Hy@FirstPageHook{%
9598 \headerps@out{%
9599 /betterpdfmark {%
9600 systemdict begin %

```

```

9601      dup /BP eq%
9602      {cleartomark gsave nulldevice []}%
9603      {dup /EP eq%
9604        {cleartomark cleartomark grestore}%
9605        {cleartomark}%
9606        ifelse%
9607      }ifelse %
9608    end%
9609  }def\Hy@ps@CR
9610  __pdfmark__ not{/pdfmark /betterpdfmark load def}if%
9611  }% end of \headerps@out
9612}% end of \AtBeginShipoutFirst
9613 %
9614 \input{pdfmark.def}%
9615 %
9616 \ifx\@pdfproducer\relax
9617   \def\@pdfproducer{Textures + Distiller}%
9618 \fi
9619 \providecommand*\@pdfborder{0 0 1}
9620 \providecommand*\@pdfborderstyle{}
9621 \providecommand*\@pdfview{XYZ}
9622 \providecommand*\@pdfviewparams{ H.V}
9623 %

```

These are called at the start and end of unboxed links; their job is to leave available PS variables called pdf@llx pdf@lly pdf@urx pdf@ury, which are the coordinates of the bounding rectangle of the link, and pdf@hoff pdf@voff which are the PDF page offsets. The Rect pair are called at the LL and UR corners of a box known to \TeX .

```

9624 \headerps@out{%

```

Textures lives in normal points, I think. So conversion from one coordinate system to another involves doing nothing.

```

9625 /vsize {\Hy@pageheight} def%
9626 /DvipsToPDF {} def%
9627 /PDFToDvips {} def%
9628 /BPToDvips {} def%
9629 /HyperBorder { 1 PDFToDvips } def\Hy@ps@CR
9630 /H.V {pdf@hoff pdf@voff null} def\Hy@ps@CR
9631 /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def\Hy@ps@CR
9632 /H.S {%
9633   currentpoint %
9634   HyperBorder add /pdf@lly exch def %
9635   dup DvipsToPDF 72 add /pdf@hoff exch def %
9636   HyperBorder sub /pdf@llx exch def%
9637 } def\Hy@ps@CR
9638 /H.L {%
9639   2 sub %
9640   PDFToDvips /HyperBase exch def %
9641   currentpoint %
9642   HyperBase sub /pdf@ury exch def%
9643   /pdf@urx exch def%
9644 } def\Hy@ps@CR
9645 /H.A {%
9646   H.L %
9647   currentpoint exch pop %
9648   vsize 72 sub exch DvipsToPDF %
9649   HyperBase sub % baseline skip
9650   sub /pdf@voff exch def%

```



```

9651 } def\Hy@ps@CR
9652 /H.R {%
9653   currentpoint %
9654   HyperBorder sub /pdf@ury exch def %
9655   HyperBorder add /pdf@urx exch def %
9656   currentpoint exch pop vsize 72 sub %
9657   exch DvipsToPDF sub /pdf@voff exch def%
9658 } def\Hy@ps@CR
9659 }

9660 \AfterBeginDocument{%
9661   \ifHy@colorlinks
9662     \headerps@out{/PDFBorder{/Border [0 0 0]}def}%
9663   \fi
9664 }

```

Textures provides built-in support for HyperTeX specials so this part combines code from `hypertex.def` with what is established by loading `pdfmark.def`, or any other driver.

```

9665 \expandafter\let\expandafter\keepPDF@SetupDoc
9666   \csname PDF@SetupDoc\endcsname
9667 \def\PDF@SetupDoc{%
9668   \ifx\@baseurl\@empty
9669   \else
9670     \special{html:<base href="\@baseurl">}%
9671   \fi
9672   \keepPDF@SetupDoc
9673 }

9674 \def\hyper@anchor#1{%
9675   \Hy@SaveLastskip
9676   \begingroup
9677     \let\protect=\string
9678     \special{html:<a name=%
9679       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9680   \endgroup
9681   \Hy@activeanchortrue
9682   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
9683   \special{html:</a>}%
9684   \Hy@activeanchorfalse
9685   \Hy@RestoreLastskip
9686 }

9687 \def\hyper@anchorstart#1{%
9688   \Hy@SaveLastskip
9689   \begingroup
9690     \hyper@chars
9691     \special{html:<a name=%
9692       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9693   \endgroup
9694   \Hy@activeanchortrue
9695 }

9696 \def\hyper@anchorend{%
9697   \special{html:</a>}%
9698   \Hy@activeanchorfalse
9699   \Hy@RestoreLastskip
9700 }

9701 \def\@urltype{url}
9702 \def\hyper@linkstart#1#2{%
9703   \expandafter\Hy@colorlink\csname @#1color\endcsname
9704   \def\Hy@tempa{#1}%

```

```

9705 \ifx\Hy@tempa\@urltype
9706 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
9707 \else
9708 \begingroup
9709 \hyper@chars
9710 \special{html:<a href=%
9711 \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
9712 \endgroup
9713 \fi
9714 }
9715 \def\hyper@linkend{%
9716 \special{html:</a>}}%
9717 \Hy@endcolorlink
9718 }
9719 \def\hyper@linkfile#1#2#3{%
9720 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
9721 }
9722 \def\hyper@linkurl#1#2{%
9723 \leavevmode
9724 \ifHy@raiselinks
9725 \setbox\@tempboxa=\color@hbox #1\color@endbox
9726 \@linkdim\dp\@tempboxa
9727 \lower\@linkdim\hbox{%
9728 \hyper@chars
9729 \special{html:<a href=\hyper@quote#2\hyper@quote>}}%
9730 }%
9731 \Hy@colorlink\@urlcolor#1%
9732 \@linkdim\ht\@tempboxa
9733 \advance\@linkdim by -6.5\p@
9734 \raise\@linkdim\hbox{\special{html:</a>}}%
9735 \Hy@endcolorlink
9736 \else
9737 \begingroup
9738 \hyper@chars
9739 \special{html:<a href=\hyper@quote#2\hyper@quote>}}%
9740 \Hy@colorlink\@urlcolor#1%
9741 \special{html:</a>}}%
9742 \Hy@endcolorlink
9743 \endgroup
9744 \fi
9745 }

```

Very poor implementation of \hyper@link without considering #1.

```

9746 \def\hyper@link#1#2#3{%
9747 \hyper@linkurl{#3}{\#\HyperDestNameFilter{#2}}}%
9748 }
9749 \def\hyper@image#1#2{%
9750 \begingroup
9751 \hyper@chars
9752 \special{html:<img src=\hyper@quote#1\hyper@quote>}}%
9753 \endgroup
9754 }
9755 </textures>

```

46.12 dvipsone

```

9756% \subsection{dvipsone driver}
9757% Over-ride the default setup macro in pdfmark driver to use Y\&Y

```

```

9758 % |\special| commands.
9759 \providecommand*{\XR@ext}{pdf}
9760 \def\Hy@raisedlink{}
9761 \providecommand*\@pdfborder{0 0 1}
9762 \providecommand*\@pdfborderstyle{}
9763 \def\literalps@out#1{\special{ps:#1}}%
9764 \def\headerps@out#1{\special{headertext=#1}}%
9765 \input{pdfmark.def}%
9766 \ifx\@pdfproducer\relax
9767   \def\@pdfproducer{dvipsone + Distiller}%
9768 \fi
9769 \def\PDF@FinishDoc{%
9770   \Hy@UseMaketitleInfos
9771   \special{PDF: Keywords \@pdfkeywords}%
9772   \special{PDF: Title \@pdftitle}%
9773   \special{PDF: Creator \@pdfcreator}%
9774   \ifx\@pdfcreationdate\@empty
9775   \else
9776     \special{PDF: CreationDate \@pdfcreationdate}%
9777   \fi
9778   \ifx\@pdfmoddate\@empty
9779   \else
9780     \special{PDF: ModDate \@pdfmoddate}%
9781   \fi
9782   \special{PDF: Author \@pdfauthor}%
9783   \ifx\@pdfproducer\relax
9784   \else
9785     \special{PDF: Producer \@pdfproducer}%
9786   \fi
9787   \special{PDF: Subject \@pdfsubject}%
9788   \Hy@DisableOption{pdfauthor}%
9789   \Hy@DisableOption{pdftitle}%
9790   \Hy@DisableOption{pdfsubject}%
9791   \Hy@DisableOption{pdfcreator}%
9792   \Hy@DisableOption{pdfcreationdate}%
9793   \Hy@DisableOption{pdfmoddate}%
9794   \Hy@DisableOption{pdfproducer}%
9795   \Hy@DisableOption{pdfkeywords}%
9796 }
9797 \def\PDF@SetupDoc{%
9798   \def\Hy@temp{}%
9799   \ifx\@pdfstartpage\@empty
9800   \else
9801     \ifx\@pdfstartview\@empty
9802     \else
9803       \edef\Hy@temp{%
9804         ,Page=\@pdfstartpage
9805         ,View=\@pdfstartview
9806       }%
9807     \fi
9808   \fi
9809   \edef\Hy@temp{%
9810     \noexpand\pdfmark{%
9811       pdfmark=/DOCVIEW,%
9812       PageMode=/\@pdfpagemode
9813     }%
9814   }

```

```

9815     }%
9816 }%
9817 \Hy@temp
9818 \ifx\@pdfpagescrop\@empty
9819 \else
9820   \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
9821 \fi
9822 \edef\Hy@temp{%
9823   \ifHy@toolbar\else /HideToolbar true\fi
9824   \ifHy@menubar\else /HideMenubar true\fi
9825   \ifHy@windowui\else /HideWindowUI true\fi
9826   \ifHy@fitwindow /FitWindow true\fi
9827   \ifHy@centerwindow /CenterWindow true\fi
9828   \ifHy@displaydoctitle /DisplayDocTitle true\fi
9829   \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9830   \Hy@UseNameKey{Direction}\@pdfdirection
9831   \Hy@UseNameKey{ViewArea}\@pdfviewarea
9832   \Hy@UseNameKey{ViewClip}\@pdfviewclip
9833   \Hy@UseNameKey{PrintArea}\@pdfprintarea
9834   \Hy@UseNameKey{PrintClip}\@pdfprintclip
9835   \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9836   \Hy@UseNameKey{Duplex}\@pdfduplex
9837   \ifx\@pdfpicktraybypdfsize\@empty
9838   \else
9839     /PickTrayByPDFSize \@pdfpicktraybypdfsize
9840   \fi
9841   \ifx\@pdfprintpagerange\@empty
9842   \else
9843     /PrintPageRange[\@pdfprintpagerange]%
9844   \fi
9845   \ifx\@pdfnumcopies\@empty
9846   \else
9847     /NumCopies \@pdfnumcopies
9848   \fi
9849 }%
9850 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
9851 \pdfmark{%
9852   pdfmark=/PUT,%
9853   Raw={%
9854     \string{Catalog\string}<<%
9855     \ifx\Hy@temp\@empty
9856     \else
9857       /ViewerPreferences<<\Hy@temp>>%
9858     \fi
9859     \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9860     \ifx\@pdflang\@empty
9861     \else
9862       /Lang(\@pdflang)%
9863     \fi
9864     \ifx\@baseurl\@empty
9865     \else
9866       /URI<</Base(\Hy@pstringB)>>%
9867     \fi
9868   >>%
9869 }%
9870 }%
9871 }

```

```

9872 \providecommand*\@pdfview{XYZ}
9873 \providecommand*\@pdfviewparams{ %
9874   gsave revscl currentpoint grestore %
9875   72 add exch pop null exch null%
9876 }
9877 \def\Hy@BorderArrayPatch{BorderArrayPatch}

```

These are called at the start and end of unboxed links; their job is to leave available PS variables called pdf@llx pdf@lly pdf@urx pdf@ury, which are the coordinates of the bounding rectangle of the link, and pdf@hoff pdf@voff which are the PDF page offsets. These latter are currently not used in the dvipsone setup. The Rect pair are called at the LL and UR corners of a box known to T_EX.

```

9878 \g@addto@macro\Hy@FirstPageHook{%
9879   \headerps@out{%

```

dvipsone lives in scaled points; does this mean 65536 or 65781?

```

9880   /DvipsToPDF { 65781 div } def%
9881   /PDFToDvips { 65781 mul } def%
9882   /BPToDvips{65781 mul}def%
9883   /HyperBorder { 1 PDFToDvips } def%
9884   /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def%

```

The values inside the /Boder array are not taken literally, but interpreted by ghostscript using the resolution of the dvi driver. I don't know how other distiller programs behaves in this manner.

```

9885   /BorderArrayPatch{%
9886     [exch{%
9887       dup dup type/integertype eq exch type/realtype eq or%
9888       {BPToDvips}if%
9889     }forall]%
9890   }def%
9891   /H.S {%
9892     currentpoint %
9893     HyperBorder add /pdf@lly exch def %
9894     dup DvipsToPDF 72 add /pdf@hoff exch def %
9895     HyperBorder sub /pdf@llx exch def%
9896   } def%
9897   /H.L {%
9898     2 sub %
9899     PDFToDvips /HyperBase exch def %
9900     currentpoint %
9901     HyperBase sub /pdf@ury exch def%
9902     /pdf@urx exch def%
9903   } def%
9904   /H.A {%
9905     H.L %
9906     currentpoint exch pop %
9907     HyperBase sub % baseline skip
9908     DvipsToPDF /pdf@voff exch def%
9909   } def%
9910   /H.R {%
9911     currentpoint %
9912     HyperBorder sub /pdf@ury exch def %
9913     HyperBorder add /pdf@urx exch def %
9914     currentpoint exch pop DvipsToPDF /pdf@voff exch def%
9915   } def%
9916   }%
9917 }
9918 \</dvipsone>

```

46.13 TeX4ht

```
9919 <*tex4ht>
9920 \providecommand*{\XR@ext}{html}
9921 \def\Hy@raisedlink{}
9922 \@ifpackageloaded{tex4ht}{%
9923   \typeout{hyperref tex4ht: tex4ht already loaded}%
9924 }{%
9925   \RequirePackage[htex4ht]{tex4ht}%
9926 }
9927 \hyperlinkfileprefix{}
9928 \def\PDF@FinishDoc{}
9929 \def\PDF@SetupDoc{%
9930   \ifx\@baseurl\@empty
9931   \else
9932     \special{t4ht=<base href="\@baseurl">}%
9933   \fi
9934 }
9935 \def\hyper@anchor#1{%
9936   \Hy@SaveLastskip
9937   \begingroup
9938     \let\protect=\string
9939     \special{t4ht=<a name=%
9940       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9941   \endgroup
9942   \Hy@activeanchortrue
9943   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
9944   \special{t4ht=</a>}%
9945   \Hy@activeanchorfalse
9946   \Hy@RestoreLastskip
9947 }
9948 \def\hyper@anchorstart#1{%
9949   \Hy@SaveLastskip
9950   \begingroup
9951     \hyper@chars\special{t4ht=<a name=%
9952       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9953   \endgroup
9954   \Hy@activeanchortrue
9955 }
9956 \def\hyper@anchorend{%
9957   \special{t4ht=</a>}%
9958   \Hy@activeanchorfalse
9959   \Hy@RestoreLastskip
9960 }
9961 \def\@urltype{url}
9962 \def\hyper@linkstart#1#2{%
9963   \expandafter\Hy@colorlink\csname @#1color\endcsname
9964   \def\Hy@tempa{#1}%
9965   \ifx\Hy@tempa\@urltype
9966     \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
9967   \else
9968     \begingroup
9969       \hyper@chars
9970       \special{t4ht=<a href=%
9971         \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
9972     \endgroup
9973   \fi
9974 }
```

```

9975 \def\hyper@linkend{%
9976   \special{t4ht=</a>}%
9977   \Hy@endcolorlink
9978 }
9979 \def\hyper@linkfile#1#2#3{%
9980   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
9981 }
9982 \def\hyper@linkurl#1#2{%
9983   \leavevmode
9984   \ifHy@raiselinks
9985     \setbox\@tempboxa=\color@hbox #1\color@endbox
9986     \@linkdim\dp\@tempboxa
9987     \lower\@linkdim\hbox{%
9988       \begingroup
9989         \hyper@chars\special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
9990       \endgroup
9991     }%
9992     \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
9993     \@linkdim\ht\@tempboxa
9994     \advance\@linkdim by -6.5\p@
9995     \raise\@linkdim\hbox{\special{t4ht=</a>}}%
9996   \else
9997     \begingroup
9998     \hyper@chars
9999     \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
10000     \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
10001     \special{t4ht=</a>}%
10002   \endgroup
10003 \fi
10004 }

```

Poor implementation of \hyper@link without considering #1.

```

10005 \def\hyper@link#1#2#3{%
10006   \hyper@linkurl{#3}{\# \HyperDestNameFilter{#2}}%
10007 }
10008 \def\hyper@image#1#2{%
10009   \begingroup
10010     \hyper@chars
10011     \special{t4ht=<img src=\hyper@quote#1\hyper@quote>}%
10012   \endgroup
10013 }
10014 \let\autoref\ref
10015 \ifx \rEfLiNK \UnDef
10016   \def\rEfLiNK #1#2{#2}%
10017 \fi
10018 \def\backref#1{}
10019 </tex4ht>
10020 <*tex4htcfg>
10021 \IfFileExists{\jobname.cfg}{\endinput}{}
10022 \Preamble{html}
10023   \begin{document}%
10024 \EndPreamble
10025 \def\TeX{TeX}
10026 \def\OMEGA{\Omega}
10027 \def\LaTeX{LaTeX}
10028 \def\LaTeXe{\LaTeX2e}
10029 \def\eTeX{e-TeX}
10030 \def\MF{Metafont}

```

```
10031 \def\MP{MetaPost}
10032 </tex4htcfg>
```

47 Driver-specific form support

47.1 pdfmarks

```
10033 <*pdfmark>
10034 \long\def\@Form[#1]{%
10035 \g@addto@macro\Hy@FirstPageHook{%
10036 \headerps@out{%
10037 [%
10038 /_objdef{pdfDocEncoding}%
10039 /type/dict%
10040 /OBJ pdfmark%
10041 [%
10042 {pdfDocEncoding}%
10043 <<%
10044 /Type/Encoding%
10045 /Differences[%
10046 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring%
10047 /tilde %
10048 39/quotesingle %
10049 96/grave %
10050 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
10051 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
10052 /quotedblbase/quotedblleft/quotedblright/quoteleft%
10053 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron%
10054 /Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
10055 164/currency %
10056 166/brokenbar %
10057 168/dieresis/copyright/ordfeminine %
10058 172/logicalnot/.notdef/registered/macron/degree/plusminus%
10059 /twosuperior/threesuperior/acute/mu %
10060 183/periodcentered/cedilla/onesuperior/ordmasculine %
10061 188/onequarter/onehalf/threequarters %
10062 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
10063 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
10064 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
10065 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
10066 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
10067 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
10068 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
10069 /iacute/icircumflex/idieresis/eth/ntilde/ograve/oacute%
10070 /ocircumflex/otilde/odieresis/divide/oslash/ugrave/uacute%
10071 /ucircumflex/udieresis/yacute/thorn/ydieresis%
10072 ]%
10073 >>%
10074 /PUT pdfmark%
10075 [%
10076 /_objdef{ZaDb}%
10077 /type/dict%
10078 /OBJ pdfmark%
10079 [%
10080 {ZaDb}%
10081 <<%
10082 /Type/Font%
10083 /Subtype/Type1%
```



```

10084     /Name/ZaDb%
10085     /BaseFont/ZapfDingbats%
10086   >>%
10087 /PUT pdfmark%
10088 [%
10089   /_objdef{Helv}%
10090   /type/dict%
10091 /OBJ pdfmark%
10092 [%
10093   {Helv}%
10094   <<%
10095     /Type/Font%
10096     /Subtype/Type1%
10097     /Name/Helv%
10098     /BaseFont/Helvetica%
10099     /Encoding{pdfDocEncoding}%
10100   >>%
10101 /PUT pdfmark%
10102 [%
10103   /_objdef{aform}%
10104   /type/dict%
10105 /OBJ pdfmark%
10106 [%
10107   /_objdef{afields}%
10108   /type/array%
10109 /OBJ pdfmark%
10110 {%
10111   [%
10112     /BBox[0 0 100 100]%
10113     /_objdef{Check}%
10114   /BP pdfmark %
10115   1 0 0 setrgbcolor%
10116   /ZapfDingbats 80 selectfont %
10117   20 20 moveto%
10118   (4)show%
10119   [/EP pdfmark%
10120   [%
10121     /BBox[0 0 100 100]%
10122     /_objdef{Cross}%
10123   /BP pdfmark %
10124   1 0 0 setrgbcolor%
10125   /ZapfDingbats 80 selectfont %
10126   20 20 moveto%
10127   (8)show%
10128   [/EP pdfmark%
10129   [%
10130     /BBox[0 0 250 100]%
10131     /_objdef{Submit}%
10132   /BP pdfmark %
10133   0.6 setgray %
10134   0 0 250 100 rectfill %
10135   1 setgray %
10136   2 2 moveto %
10137   2 98 lineto %
10138   248 98 lineto %
10139   246 96 lineto %
10140   4 96 lineto %

```

```

10141 4 4 lineto %
10142 fill %
10143 0.34 setgray %
10144 248 98 moveto %
10145 248 2 lineto %
10146 2 2 lineto %
10147 4 4 lineto %
10148 246 4 lineto %
10149 246 96 lineto %
10150 fill%
10151 /Helvetica 76 selectfont %
10152 0 setgray %
10153 8 22.5 moveto%
10154 (Submit)show%
10155 [/EP pdfmark%
10156 [%
10157   /BBox[0 0 250 100]%
10158   /_objdef{SubmitP}%
10159 /BP pdfmark %
10160 0.6 setgray %
10161 0 0 250 100 rectfill %
10162 0.34 setgray %
10163 2 2 moveto %
10164 2 98 lineto %
10165 248 98 lineto %
10166 246 96 lineto %
10167 4 96 lineto %
10168 4 4 lineto %
10169 fill %
10170 1 setgray %
10171 248 98 moveto %
10172 248 2 lineto %
10173 2 2 lineto %
10174 4 4 lineto %
10175 246 4 lineto %
10176 246 96 lineto %
10177 fill%
10178 /Helvetica 76 selectfont %
10179 0 setgray %
10180 10 20.5 moveto%
10181 (Submit)show%
10182 [/EP pdfmark%
10183 } ?pdfmark%
10184 [%
10185 {aform}%
10186 <<%
10187   /Fields{afields}%
10188   /DR<<%
10189     /Font<<%
10190       /ZaDb{ZaDb}%
10191       /Helv{Helv}%
10192     >>%
10193   >>%
10194   /DA(/Helv 10 Tf 0 g)%
10195   /CO{corder}%
10196   \ifHy@pdfa
10197   \else

```

```

10198      /NeedAppearances true%
10199      \fi
10200    >>%
10201  /PUT pdfmark%
10202  [%
10203    {Catalog}%
10204    <<%
10205      /AcroForm{aform}%
10206    >>%
10207  /PUT pdfmark%
10208  [%
10209    /_objdef{corder}%
10210    /type/array%
10211  /OBJ pdfmark% dps
10212  ]}%
10213    \setkeys{Form}{#1}%
10214  }
10215  \def\@endForm{}
10216  \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
10217    \typeout{Sorry, pdfmark drivers do not support FORM gauges}%
10218  }
10219  \def\@TextField[#1]#2{% parameters, label
10220    \def\Fld@name{#2}%
10221    \def\Fld@default{}%
10222    \let\Fld@value\@empty
10223    \def\Fld@width{\DefaultWidthofText}%
10224    \def\Fld@height{%
10225      \ifFld@multiline
10226        \DefaultHeightofTextMultiline
10227      \else
10228        \DefaultHeightofText
10229      \fi
10230    }%
10231    \begingroup
10232      \Field@toks={ }%
10233      \expandafter\HyField@SetKeys\expandafter{%
10234        \DefaultOptionsofText,#1%
10235      }%
10236      \HyField@FlagsText
10237      \ifFld@hidden\def\Fld@width{1sp}\fi
10238      \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
10239      \LayoutTextField{#2}{%
10240        \Hy@escapeform\PDFForm@Text
10241        \pdfmark[\MakeTextField{\Fld@width}{\Fld@height}]{%
10242          pdfmark=/ANN,Raw={\PDFForm@Text}%
10243        }%
10244      }%
10245    \endgroup
10246  }
10247  \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
10248    \def\Fld@name{#2}%
10249    \let\Fld@default\relax
10250    \let\Fld@value\relax
10251    \def\Fld@width{\DefaultWidthofChoiceMenu}%
10252    \def\Fld@height{\DefaultHeightofChoiceMenu}%
10253    \begingroup
10254      \Fld@menulength=0 %

```

```

10255 \@tempdima\z@
10256 \@for\@curropt:=#3\do{%
10257 \expandafter\Fld@checkequals\@curropt==\%
10258 \Hy@StepCount\Fld@menulength
10259 \settowidth{\@tempdimb}{\@currDisplay}%
10260 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
10261 }%
10262 \advance\@tempdima by 15\p@
10263 \Field@toks={ }%
10264 \beginngroup
10265 \HyField@SetKeys{#1}%
10266 \edef\x{\endgroup
10267 \noexpand\expandafter
10268 \noexpand\HyField@SetKeys
10269 \noexpand\expandafter{%
10270 \expandafter\noexpand\csname DefaultOptionsof%
10271 \ifFld@radio
10272 Radio%
10273 \else
10274 \ifFld@combo
10275 \ifFld@popdown
10276 PopdownBox%
10277 \else
10278 ComboBox%
10279 \fi
10280 \else
10281 ListBox%
10282 \fi
10283 \fi
10284 \endcsname
10285 }%
10286 }\x
10287 \HyField@SetKeys{#1}%
10288 \ifFld@hidden\def\Fld@width{1sp}\fi
10289 \ifx\Fld@value\relax
10290 \let\Fld@value\Fld@default
10291 \fi
10292 \LayoutChoiceField{#2}{%
10293 \ifFld@radio
10294 \HyField@FlagsRadioButton
10295 \@@Radio{#3}%
10296 \else
10297 \beginngroup
10298 \HyField@FlagsChoice
10299 \ifdim\Fld@width<\@tempdima
10300 \ifdim\@tempdima<1cm\@tempdima1cm\fi
10301 \edef\Fld@width{\the\@tempdima}%
10302 \fi
10303 \ifFld@combo
10304 \else
10305 \@tempdima=\the\Fld@menulength\Fld@charsize
10306 \advance\@tempdima by \Fld@borderwidth bp %
10307 \advance\@tempdima by \Fld@borderwidth bp %
10308 \edef\Fld@height{\the\@tempdima}%
10309 \fi
10310 \@@ListBox{#3}%
10311 \endgroup

```

```

10312     \fi
10313   }%
10314 \endgroup
10315 }
10316 \def\@@Radio#1{%
10317   \Fld@listcount=0 %
10318   \@for\@curropt:=#1\do{%
10319     \expandafter\Fld@checkequals\@curropt==\%
10320     \Hy@StepCount\Fld@listcount
10321     \@currDisplay\space
10322     \Hy@escapeform\PDFForm@Radio
10323     \pdfmark[\MakeRadioField{\Fld@width}{\Fld@height}]{%
10324       pdfmark=/ANN,%
10325       Raw={\PDFForm@Radio /AP <</N <</\@currValue\space {Check}>> >>}%
10326     } % deliberate space between radio buttons
10327   }%
10328 }
10329 \newcount\Fld@listcount
10330 \def\@@ListBox#1{%
10331   \HyField@PDFChoices{#1}%
10332   \Hy@escapeform\PDFForm@List
10333   \pdfmark[\MakeChoiceField{\Fld@width}{\Fld@height}]{%
10334     pdfmark=/ANN,Raw={\PDFForm@List}%
10335   }%
10336 }
10337 \def\@PushButton[#1]#2{% parameters, label
10338   \def\Fld@name{#2}%
10339   \begingroup
10340     \Field@toks={ }%
10341     \expandafter\HyField@SetKeys\expandafter{%
10342       \DefaultOptionsofPushButton,#1%
10343     }%
10344     \ifHy@pdfa
10345       \PackageError{hyperref}{%
10346         PDF/A: Push button with JavaScript is prohibited%
10347       }{\@ehc
10348         \LayoutPushButtonField{%
10349           \leavevmode
10350           \MakeButtonField{#2}%
10351         }%
10352       \else
10353         \HyField@FlagsPushButton
10354         \ifFld@hidden\def\Fld@width{1sp}\fi
10355         \LayoutPushButtonField{%
10356           \leavevmode
10357           \Hy@escapeform\PDFForm@Push
10358           \pdfmark[\MakeButtonField{#2}]{%
10359             pdfmark=/ANN,Raw={\PDFForm@Push}%
10360           }%
10361         }%
10362       \fi
10363     \endgroup
10364 }
10365 \def\@Submit[#1]#2{%
10366   \Field@toks={ }%
10367   \def\Fld@width{\DefaultWidthofSubmit}%
10368   \def\Fld@height{\DefaultHeightofSubmit}%

```

```

10369 \begingroup
10370   \expandafter\HyField@SetKeys\expandafter{%
10371     \DefaultOptionsofSubmit,#1%
10372   }%
10373   \HyField@FlagsPushButton
10374   \HyField@FlagsSubmit
10375   \ifFld@hidden\def\Fld@width{1sp}\fi
10376   \Hy@escapeform\PDFForm@Submit
10377   \pdfmark[\MakeButtonField{#2}]{%
10378     pdfmark=/ANN,%
10379     Raw={\PDFForm@Submit /AP << /N {Submit} /D {SubmitP} >>}%
10380   }%
10381 \endgroup
10382 }
10383 \def\@Reset[#1]#2{%
10384   \Field@toks={ }%
10385   \def\Fld@width{\DefaultWidthofReset}%
10386   \def\Fld@height{\DefaultHeightofReset}%
10387   \begingroup
10388     \expandafter\HyField@SetKeys\expandafter{%
10389       \DefaultOptionsofReset,#1%
10390     }%
10391     \leavevmode
10392     \ifHy@pdfa
10393       \PackageError{hyperref}{%
10394         PDF/A: Reset action is prohibited%
10395       }\@ehc
10396       \MakeButtonField{#2}%
10397     \else
10398       \HyField@FlagsPushButton
10399       \ifFld@hidden\def\Fld@width{1sp}\fi
10400       \Hy@escapeform\PDFForm@Reset
10401       \pdfmark[\MakeButtonField{#2}]{%
10402         pdfmark=/ANN,Raw={\PDFForm@Reset}%
10403       }%
10404     \fi
10405   \endgroup
10406 }%
10407 \def\@CheckBox[#1]#2{% parameters, label
10408   \def\Fld@name{#2}%
10409   \def\Fld@default{0}%
10410   \begingroup
10411     \def\Fld@width{\DefaultWidthofCheckBox}%
10412     \def\Fld@height{\DefaultHeightofCheckBox}%
10413     \Field@toks={ }%
10414     \expandafter\HyField@SetKeys\expandafter{%
10415       \DefaultOptionsofCheckBox,#1%
10416     }%
10417     \HyField@FlagsCheckBox
10418     \ifFld@hidden\def\Fld@width{1sp}\fi
10419     \LayoutCheckField{#2}{%
10420       \Hy@escapeform\PDFForm@Check
10421       \pdfmark[\MakeCheckField{\Fld@width}{\Fld@height}]{%
10422         pdfmark=/ANN,Raw={\PDFForm@Check}%
10423       }%
10424     }%
10425   \endgroup

```

```

10426 }
10427 </pdfmark>

```

47.2 HyperTeX

```

10428 <*hypertext>
10429 \def\@Form[#1]{\typeout{Sorry, HyperTeX does not support FORMs}}
10430 \def\@endForm{}
10431 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
10432   \typeout{Sorry, HyperTeX does not support FORM gauges}%
10433 }
10434 \def\@TextField[#1]#2{% parameters, label
10435   \typeout{Sorry, HyperTeX does not support FORM text fields}%
10436 }
10437 \def\@CheckBox[#1]#2{% parameters, label
10438   \typeout{Sorry, HyperTeX does not support FORM checkboxes}%
10439 }
10440 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
10441   \typeout{Sorry, HyperTeX does not support FORM choice menus}%
10442 }
10443 \def\@PushButton[#1]#2{% parameters, label
10444   \typeout{Sorry, HyperTeX does not support FORM pushbuttons}%
10445 }
10446 \def\@Reset[#1]#2{\typeout{Sorry, HyperTeX does not support FORMs}}
10447 \def\@Submit[#1]#2{\typeout{Sorry, HyperTeX does not support FORMs}}
10448 </hypertext>

```

47.3 TeX4ht

```

10449 <*tex4ht>
10450 \def\@Form[#1]{%
10451   \setkeys{Form}{#1}%
10452   \HCode{<form action="\Form@action" method="\Form@method">}%
10453 }
10454 \def\@endForm{\HCode{</form>}}
10455 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
10456   \typeout{Sorry, TeX4ht does not support gauges}%
10457 }
10458 \def\@TextField[#1]#2{% parameters, label
10459   \let\Hy@reserved@a\@empty
10460   \def\Fld@name{#2}%
10461   \def\Fld@default{}%
10462   \bgroup
10463     \Field@toks={ }%
10464     \setkeys{Field}{#1}%
10465     \HCode{<label for="\Fld@name">#2</label>}%
10466     \ifFld@password
10467       \@@PasswordField
10468     \else
10469       \@@TextField
10470     \fi
10471   \egroup
10472 }
10473 \def\@@PasswordField{%
10474   \HCode{%
10475     <input type="password" %
10476       id="\Fld@name" %
10477       name="\Fld@name" %
10478       \ifFld@hidden type="hidden" \fi

```

```

10479     value="\Fld@default" %
10480     \the\Field@toks
10481     >%
10482 }%
10483 }
10484 \def\@@TextField{%
10485   \ifFld@multiline
10486     \HCode{<textarea %
10487       \ifFld@readonly readonly \fi
10488       id="\Fld@name" %
10489       name="\Fld@name" %
10490       \ifFld@hidden type="hidden" \fi
10491       \the\Field@toks>%
10492   }%
10493   \Fld@default
10494   \HCode{</textarea>}%
10495 \else
10496   \HCode{<input type="text" %
10497     \ifFld@readonly readonly \fi
10498     id="\Fld@name" %
10499     name="\Fld@name" %
10500     \ifFld@hidden type="hidden" \fi
10501     value="\Fld@default" %
10502     \the\Field@toks>%
10503   }%
10504 \fi
10505 }
10506 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
10507   \def\Fld@name{#2}%
10508   \def\Fld@default{}%
10509   \let\Hy@reserved@a\relax
10510   \begin{group}
10511     \expandafter\Fld@findlength#3\\%
10512     \Field@toks={ }%
10513     \setkeys{Field}{#1}%
10514     #2%
10515     \ifFld@radio
10516       \expandafter\@@Radio#3\\%
10517     \else
10518       \expandafter\@@Menu#3\\%
10519     \fi
10520   \end{group}
10521 }
10522 \def\Fld@findlength#1\\{%
10523   \Fld@menulength=0 %
10524   \@for\@curropt:=#1\do{\Hy@StepCount\Fld@menulength}%
10525 }
10526 \def\@@Menu#1\\{%
10527   \HCode{<select size="\the\Fld@menulength" %
10528     name="\Fld@name" %
10529     \the\Field@toks>%
10530   }%
10531   \@for\@curropt:=#1\do{%
10532     \expandafter\Fld@checkequals\@curropt==\\%
10533     \HCode{<option %
10534       \ifx\@curropt\Fld@default selected \fi
10535       value="\@currValue">\@currDisplay</option>%

```



```

10536     }%
10537 }%
10538 \HCode{</select>}%
10539 }
10540 \def\@Radio#1\\{%
10541   \@for\@curropt:=#1\do{%
10542     \expandafter\Fld@checkequals\@curropt==\\%
10543     \HCode{<input type="radio" %
10544       \ifx\@curropt\Fld@default checked \fi
10545       name="\Fld@name" %
10546       value="\@currValue" %
10547       \the\Field@toks>%
10548     }%
10549     \@currDisplay
10550   }%
10551 }
10552 \def\@PushButton[#1]#2{% parameters, label
10553   \def\Fld@name{#2}%
10554   \bgroup
10555     \Field@toks={ }%
10556     \setkeys{Field}{#1}%
10557     \HCode{<input type="button" %
10558       name="\Fld@name" %
10559       value="#2" %
10560       \the\Field@toks>%
10561     }%
10562     \HCode{</button>}%
10563   \egroup
10564 }
10565 \def\@Submit[#1]#2{%
10566   \HCode{<button type="submit">#2</button>}%
10567 }
10568 \def\@Reset[#1]#2{%
10569   \HCode{<button type="reset">#2</button>}%
10570 }
10571 \def\@CheckBox[#1]#2{% parameters, label
10572   \let\Hy@reserved@a\@empty
10573   \def\Fld@name{#2}%
10574   \def\Fld@default{0}%
10575   \bgroup
10576     \Field@toks={ }%
10577     \setkeys{Field}{#1}%
10578     \HCode{<input type="checkbox" %
10579       \ifFld@checked checked \fi
10580       \ifFld@disabled disabled \fi
10581       \ifFld@readonly readonly \fi
10582       name="\Fld@name" %
10583       \ifFld@hidden type="hidden" \fi
10584       value="\Fld@default" %
10585       \the\Field@toks>%
10586     #2%
10587   }%
10588   \egroup
10589 }
10590 </tex4ht>

```

47.4 pdfTeX

```

10591 <*pdftex>
10592 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
10593   \typeout{Sorry, pdftex does not support FORM gauges}%
10594 }
10595 \def\MakeFieldObject#1#2{\sbox0{#1}%
10596   \immediate\pdfxform0 %
10597   \expandafter\edef\csname #2object\endcsname{%
10598     \the\pdflastxform\space 0 R%
10599   }%
10600 % \hbox to Opt{\hskip-\maxdimen{\pdfrefxform \the\pdflastxform}}}%
10601 }%
10602 \def\HyField@afields{}
10603 \begingroup\expandafter\expandafter\expandafter\endgroup
10604 \expandafter\ifx\csname pdflastlink\endcsname\relax
10605   \let\HyField@AddToFields\relax
10606   \PackageInfo{hyperref}{%
10607     You need pdfTeX 1.40.0 for setting the /Fields entry.\MessageBreak
10608     Adobe Reader/Acrobat accepts an empty /Field array,\MessageBreak
10609     but other PDF viewers might complain%
10610   }%
10611 \else
10612   \def\HyField@AddToFields{%
10613     \xdef\HyField@afields{%
10614       \ifx\HyField@afields\@empty
10615         \else
10616           \HyField@afields
10617           \space
10618         \fi
10619       \the\pdflastlink\space 0 R%
10620     }%
10621   }%
10622 \fi
10623 \def\@Form[#1]{%
10624   \@ifundefined{textcolor}{\let\textcolor\@gobble}{}}%
10625   \setkeys{Form}{#1}%
10626   \ifnum\pdftexversion>13 %
10627     \pdfrefobj\OBJ\pdfdocencoding
10628     \pdfrefobj\OBJ@ZaDb
10629     \pdfrefobj\OBJ@Helv
10630 \fi
10631 \AtEndDocument{%
10632   \immediate\pdfobj{%
10633     <<%
10634       /Fields[\HyField@afields]%
10635       /DR<<%
10636         /Font<<%
10637           /ZaDb \OBJ@ZaDb\space 0 R%
10638           /Helv \OBJ@Helv\space 0 R%
10639         >>%
10640       >>%
10641       /DA(/Helv 10 Tf 0 g)%
10642       \ifHy@pdfa
10643       \else
10644         /NeedAppearances true%
10645       \fi
10646     >>%
10647   }%

```

```

10648 \edef\OBJ@acroform{\the\pdflastobj}%
10649 \pdfcatalog{/AcroForm \OBJ@acroform\space 0 R}%
10650 }%
10651 \MakeFieldObject{%

```

Same as \ding{123} of package pifont.

```

10652 \beginngroup
10653 \fontfamily{pzd}%
10654 \fontencoding{U}%
10655 \fontseries{m}%
10656 \fontshape{n}%
10657 \selectfont
10658 \char123 %
10659 \endgroup
10660 }{Ding}%
10661 \MakeFieldObject{%
10662 \fbox{\textcolor{yellow}{\textsf{Submit}}}%
10663 }{Submit}%
10664 \MakeFieldObject{%
10665 \fbox{\textcolor{yellow}{\textsf{SubmitP}}}%
10666 }{SubmitP}%
10667 }
10668 \def\@endForm{}
10669 \def\@TextField[#1]#2{% parameters, label
10670 \def\Fld@name{#2}%
10671 \def\Fld@default{}%
10672 \let\Fld@value\@empty
10673 \def\Fld@width{\DefaultWidthofText}%
10674 \def\Fld@height{%
10675 \ifFld@multiline
10676 \DefaultHeightofTextMultiline
10677 \else
10678 \DefaultHeightofText
10679 \fi
10680 }%
10681 \beginngroup
10682 \Field@toks={ }%
10683 \expandafter\HyField@SetKeys\expandafter{%
10684 \DefaultOptionsofText,#1%
10685 }%
10686 \PDFForm@Name
10687 \HyField@FlagsText
10688 \ifFld@hidden\def\Fld@width{1sp}\fi
10689 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
10690 \LayoutTextField{#2}{%
10691 \Hy@escapeform\PDFForm@Text
10692 \pdfstartlink user {\PDFForm@Text}\relax
10693 \MakeTextField{\Fld@width}{\Fld@height}\pdfendlink
10694 \HyField@AddToFields
10695 }%
10696 \endgroup
10697 }
10698 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
10699 \def\Fld@name{#2}%
10700 \let\Fld@default\relax
10701 \let\Fld@value\relax
10702 \def\Fld@width{\DefaultWidthofChoiceMenu}%
10703 \def\Fld@height{\DefaultHeightofChoiceMenu}%

```

```

10704 \beginngroup
10705   \Fld@menulength=0 %
10706   \@tempdima\z@
10707   \@for\@curropt:=#3\do{%
10708     \expandafter\Fld@checkequals\@curropt==\%
10709     \Hy@StepCount\Fld@menulength
10710     \settowidth{\@tempdimb}{\@currDisplay}%
10711     \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
10712   }%
10713   \advance\@tempdima by 15\p@
10714   \Field@toks={ }%
10715   \beginngroup
10716     \HyField@SetKeys{#1}%
10717   \edef\x{\endgroup
10718     \noexpand\expandafter
10719     \noexpand\HyField@SetKeys
10720     \noexpand\expandafter{%
10721       \expandafter\noexpand\csname DefaultOptionsof%
10722         \ifFld@radio
10723           Radio%
10724         \else
10725           \ifFld@combo
10726             \ifFld@popdown
10727               PopdownBox%
10728             \else
10729               ComboBox%
10730             \fi
10731           \else
10732             ListBox%
10733           \fi
10734         \fi
10735       \endcsname
10736     }%
10737   }\x
10738   \HyField@SetKeys{#1}%
10739   \PDFForm@Name
10740   \ifFld@hidden\def\Fld@width{1sp}\fi
10741   \ifx\Fld@value\relax
10742     \let\Fld@value\Fld@default
10743   \fi
10744   \LayoutChoiceField{#2}{%
10745     \ifFld@radio
10746       \HyField@FlagsRadioButton
10747       \@@Radio{#3}%
10748     \else
10749       \beginngroup
10750         \HyField@FlagsChoice
10751         \ifdim\Fld@width<\@tempdima
10752           \ifdim\@tempdima<1cm\@tempdima1cm\fi
10753           \edef\Fld@width{\the\@tempdima}%
10754         \fi
10755         \ifFld@combo
10756         \else
10757           \@tempdima=\the\Fld@menulength\Fld@charsize
10758           \advance\@tempdima by \Fld@borderwidth bp %
10759           \advance\@tempdima by \Fld@borderwidth bp %
10760           \edef\Fld@height{\the\@tempdima}%

```

```

10761         \fi
10762         \@@ListBox{#3}%
10763     \endgroup
10764     \fi
10765 }%
10766 \endgroup
10767 }
10768 \def\@@Radio#1{%
10769     \Fld@listcount=0 %
10770     \@for\@curropt:=#1\do{%
10771         \expandafter\Fld@checkequals\@curropt==\%
10772         \Hy@StepCount\Fld@listcount
10773         \@currDisplay\space
10774         \leavevmode
10775         \Hy@escapeform\PDFForm@Radio
10776         \pdfstartlink user {%
10777             \PDFForm@Radio
10778             /AP<<%
10779             /N<<%

```

Laurent.Guillope@math.univ-nantes.fr (Laurent Guillope) persuades me that this was wrong: /Fld@name\the\Fld@listcount. But I leave it here to remind me that it is untested.

```

10780         /\@currValue\space \DingObject
10781         >>%
10782     >>%
10783 }%
10784 \relax
10785 \MakeRadioField{\Fld@width}{\Fld@height}\pdfendlink
10786 \ifnum\Fld@listcount=1 %
10787     \HyField@AddToFields
10788 \fi
10789 \space % deliberate space between radio buttons
10790 }%
10791 }
10792 \newcount\Fld@listcount
10793 \def\@@ListBox#1{%
10794     \HyField@PDFChoices{#1}%
10795     \leavevmode
10796     \Hy@escapeform\PDFForm@List
10797     \pdfstartlink user {\PDFForm@List}\relax
10798     \MakeChoiceField{\Fld@width}{\Fld@height}%
10799     \pdfendlink
10800     \HyField@AddToFields
10801 }
10802 \def\@PushButton[#1]#2{% parameters, label
10803     \def\Fld@name{#2}%
10804     \begingroup
10805         \Field@toks={ }%
10806         \expandafter\HyField@SetKeys\expandafter{%
10807             \DefaultOptionsofPushButton,#1%
10808         }%
10809         \PDFForm@Name
10810         \ifHy@pdfa
10811             \PackageError{hyperref}{%
10812                 PDF/A: Push button with JavaScript is prohibited%
10813             }\@ehc
10814         \LayoutPushButtonField{%

```

```

10815         \leavevmode
10816         \MakeButtonField{#2}%
10817     }%
10818 \else
10819     \HyField@FlagsPushButton
10820     \ifFld@hidden\def\Fld@width{1sp}\fi
10821     \LayoutPushButtonField{%
10822         \leavevmode
10823         \Hy@escapeform\PDFForm@Push
10824         \pdfstartlink user {\PDFForm@Push}\relax
10825         \MakeButtonField{#2}%
10826         \pdfendlink
10827         \HyField@AddToFields
10828     }%
10829 \fi
10830 \endgroup
10831 }
10832 \def\@Submit[#1]#2{%
10833     \Field@toks={ }%
10834     \def\Fld@width{\DefaultWidthofSubmit}%
10835     \def\Fld@height{\DefaultHeightofSubmit}%
10836     \begingroup
10837         \expandafter\HyField@SetKeys\expandafter{%
10838             \DefaultOptionsofSubmit,#1%
10839         }%
10840         \HyField@FlagsPushButton
10841         \HyField@FlagsSubmit
10842         \ifFld@hidden\def\Fld@width{1sp}\fi
10843         \leavevmode
10844         \Hy@escapeform\PDFForm@Submit
10845         \pdfstartlink user {%
10846             \PDFForm@Submit
10847             /AP<</N \SubmitObject/D \SubmitPObject>>%
10848         }%
10849         \relax
10850         \MakeButtonField{#2}%
10851         \pdfendlink
10852         \HyField@AddToFields
10853     \endgroup
10854 }
10855 \def\@Reset[#1]#2{%
10856     \Field@toks={ }%
10857     \def\Fld@width{\DefaultWidthofReset}%
10858     \def\Fld@height{\DefaultHeightofReset}%
10859     \begingroup
10860         \expandafter\HyField@SetKeys\expandafter{%
10861             \DefaultOptionsofReset,#1%
10862         }%
10863         \leavevmode
10864         \ifHy@pdfa
10865             \PackageError{hyperref}{%
10866                 PDF/A: Reset action is prohibited%
10867             }\@ehc
10868             \MakeButtonField{#2}%
10869         \else
10870             \HyField@FlagsPushButton
10871             \ifFld@hidden\def\Fld@width{1sp}\fi

```

```

10872 \Hy@escapeform\PDFForm@Reset
10873 \pdfstartlink user {\PDFForm@Reset}\relax
10874 \MakeButtonField{#2}%
10875 \pdfendlink
10876 \HyField@AddToFields
10877 \fi
10878 \endgroup
10879 }
10880 \def\@CheckBox[#1]#2{% parameters, label
10881 \def\Fld@name{#2}%
10882 \def\Fld@default{0}%
10883 \begingroup
10884 \def\Fld@width{\DefaultWidthofCheckBox}%
10885 \def\Fld@height{\DefaultHeightofCheckBox}%
10886 \Field@toks={ }%
10887 \expandafter\HyField@SetKeys\expandafter{%
10888 \DefaultOptionsofCheckBox,#1%
10889 }%
10890 \PDFForm@Name
10891 \HyField@FlagsCheckBox
10892 \ifFld@hidden\def\Fld@width{1sp}\fi
10893 \LayoutCheckField{#2}{%
10894 \Hy@escapeform\PDFForm@Check
10895 \pdfstartlink user {\PDFForm@Check}\relax
10896 \MakeCheckField{\Fld@width}{\Fld@height}%
10897 \pdfendlink
10898 \HyField@AddToFields
10899 }%
10900 \endgroup
10901 }
10902 \pdfobj {%
10903 <<%
10904 /Type/Encoding%
10905 /Differences[%
10906 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek%
10907 /ring/tilde %
10908 39/quotesingle %
10909 96/grave %
10910 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
10911 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
10912 /quotedblbase/quotedblleft/quotedblright/quoteleft%
10913 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE%
10914 /Scaron/Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
10915 164/currency %
10916 166/brokenbar %
10917 168/dieresis/copyright/ordfeminine %
10918 172/logicalnot/.notdef/registered/macron/degree/plusminus%
10919 /twosuperior/threesuperior/acute/mu %
10920 183/periodcentered/cedilla/onesuperior/ordmasculine %
10921 188/onequarter/onehalf/threequarters %
10922 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
10923 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
10924 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
10925 /Ocircumflex/Otilde/Odieresis/multiply/Ugrave%
10926 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
10927 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
10928 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%

```

```

10929      /iacute/icircumflex/idieresis/eth/ntilde/ograve/oacute%
10930      /ocircumflex/otilde/odieresis/divide/oslash/ugrave%
10931      /uacute/ucircumflex/udieresis/yacute/thorn/ydieresis%
10932  ]%
10933  >>%
10934 }
10935 \edef\OBJ@pdfdocencoding{\the\pdflastobj}
10936 \pdfobj{%
10937  <<%
10938    /Type/Font%
10939    /Subtype/Type1%
10940    /Name/ZaDb%
10941    /BaseFont/ZapfDingbats%
10942  >>%
10943 }
10944 \edef\OBJ@ZaDb{\the\pdflastobj}
10945 \pdfobj{%
10946  <<%
10947    /Type/Font%
10948    /Subtype/Type1%
10949    /Name/Helv%
10950    /BaseFont/Helvetica%
10951    /Encoding \OBJ@pdfdocencoding\space 0 R%
10952  >>%
10953 }
10954 \edef\OBJ@Helv{\the\pdflastobj}
10955 </pdftex>

```

47.5 dvipdfm

D. P. Story adapted the pdf_T_EX forms part for dvipdfm, of which version 0.12.7b or higher is required because of a bug.

```
10956 < *dvipdfm >
```

\@Gauge

```

10957 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
10958   \typeout{Sorry, dvipdfm does not support FORM gauges}%
10959 }

```

\@Form

```

10960 \def\@Form[#1]{%
10961   \@ifundefined{textcolor}{\let\textcolor\@gobble}{}%
10962   \setkeys{Form}{#1}%
10963   \@pdfm@mark{obj @afields []}%
10964   \@pdfm@mark{obj @corder []}%
10965   \@pdfm@mark{%
10966     obj @aform <<%
10967       /Fields @afields%
10968       /DR<<%
10969       /Font<<%
10970         /ZaDb @OBJZaDb%
10971         /Helv @OBJHelv%
10972       >>%
10973     >>%
10974     /DA(/Helv 10 Tf 0 g)%
10975     /CO @corder%
10976     \ifHy@pdfa

```



```

10977         \else
10978             /NeedAppearances true%
10979         \fi
10980     >>%
10981 }%
10982 \@pdfm@mark{put @catalog <</AcroForm @aform>>}%
10983 }

\@endForm

10984 \def\@endForm{}

\dvipdfm@setdim \dvipdfm@setdim sets dimensions for ann using \pdfm@box.
10985 \def\dvipdfm@setdim{%
10986     height \the\ht\pdfm@box\space
10987     width \the\wd\pdfm@box\space
10988     depth \the\dp\pdfm@box\space
10989 }

\HyField@AnnotCount
10990 \newcount\HyField@AnnotCount
10991 \HyField@AnnotCount=\z@

\HyField@AdvanceAnnotCount
10992 \def\HyField@AdvanceAnnotCount{%
10993     \global\advance\HyField@AnnotCount\@ne
10994 }

\HyField@TheAnnotCount
10995 \def\HyField@TheAnnotCount{%
10996     \the\HyField@AnnotCount
10997 }

\@TextField
10998 \def\@TextField[#1]#2{% parameters, label
10999     \def\Fld@name{#2}%
11000     \def\Fld@default{}%
11001     \let\Fld@value\@empty
11002     \def\Fld@width{\DefaultWidthofText}%
11003     \def\Fld@height{%
11004         \ifFld@multiline
11005             \DefaultHeightofTextMultiline
11006         \else
11007             \DefaultHeightofText
11008         \fi
11009     }%
11010     \beginngroup
11011         \Field@toks={ }%
11012         \expandafter\HyField@SetKeys\expandafter{%
11013             \DefaultOptionsofText,#1%
11014         }%
11015         \PDFForm@Name
11016         \HyField@FlagsText
11017         \ifFld@hidden\def\Fld@width{1sp}\fi
11018         \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
11019         \setbox\pdfm@box=\hbox{%
11020             \MakeTextField{\Fld@width}{\Fld@height}%

```

```

11021 }%
11022 \HyField@AdvanceAnnotCount
11023 \LayoutTextField{#2}{%
11024   \Hy@escapeform\PDFForm@Text
11025   \@pdfm@mark{%
11026     ann @text\HyField@TheAnnotCount\space
11027     \dvipdfm@setdim << \PDFForm@Text >>%
11028   }%
11029 }%
11030 \unhbox\pdfm@box
11031 \@pdfm@mark{put @afields @text\HyField@TheAnnotCount}%
11032 % record in @afields array
11033 \endgroup
11034 }

```

\@ChoiceMenu

```

11035 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11036   \def\Fld@name{#2}%
11037   \let\Fld@default\relax
11038   \let\Fld@value\relax
11039   \def\Fld@width{\DefaultWidthofChoiceMenu}%
11040   \def\Fld@height{\DefaultHeightofChoiceMenu}%
11041   \begingroup
11042     \Fld@menulength=0 %
11043     \@tempdima\z@
11044     \@for\@curropt:=#3\do{%
11045       \expandafter\Fld@checkequals\@curropt==\%
11046       \Hy@StepCount\Fld@menulength
11047       \settowidth{\@tempdimb}{\@currDisplay}%
11048       \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
11049     }%
11050     \advance\@tempdima by 15\p@
11051     \Field@toks={ }%
11052     \begingroup
11053       \HyField@SetKeys{#1}%
11054     \edef\x{\endgroup
11055       \noexpand\expandafter
11056       \noexpand\HyField@SetKeys
11057       \noexpand\expandafter{%
11058         \expandafter\noexpand\csname DefaultOptionsof%
11059           \ifFld@radio
11060             Radio%
11061           \else
11062             \ifFld@combo
11063               \ifFld@popdown
11064                 PopdownBox%
11065               \else
11066                 ComboBox%
11067             \fi
11068           \else
11069             ListBox%
11070           \fi
11071         \fi
11072       \endcsname
11073     }%
11074   }\x
11075   \HyField@SetKeys{#1}%

```

```

11076 \PDFForm@Name
11077 \ifFld@hidden\def\Fld@width{1sp}\fi
11078 \ifx\Fld@value\relax
11079 \let\Fld@value\Fld@default
11080 \fi
11081 \LayoutChoiceField{#2}{%
11082 \ifFld@radio
11083 \HyField@FlagsRadioButton
11084 \@@Radio{#3}%
11085 \else
11086 \beginngroup
11087 \HyField@FlagsChoice
11088 \ifdim\Fld@width<\@tempdima
11089 \ifdim\@tempdima<1cm\@tempdima1cm\fi
11090 \edef\Fld@width{\the\@tempdima}%
11091 \fi
11092 \ifFld@combo
11093 \else
11094 \@tempdima=\the\Fld@menulength\Fld@charsize
11095 \advance\@tempdima by \Fld@borderwidth bp %
11096 \advance\@tempdima by \Fld@borderwidth bp %
11097 \edef\Fld@height{\the\@tempdima}%
11098 \fi
11099 \@@ListBox{#3}%
11100 \endgroup
11101 \fi
11102 }%
11103 \endgroup
11104 }

```

\@@Radio

```

11105 \def\@@Radio#1{%
11106 \Fld@listcount=0 %
11107 \setbox\pdfm@box=\hbox{\MakeRadioField{\Fld@width}{\Fld@height}}%
11108 \@for\@curropt:=#1\do{%
11109 \expandafter\Fld@checkequals\@curropt==\%
11110 \Hy@StepCount\Fld@listcount
11111 \@currDisplay\space
11112 \leavevmode
11113 \Hy@escapeform\PDFForm@Radio
11114 \ifnum\Fld@listcount=1 %
11115 \HyField@AdvanceAnnotCount
11116 \fi
11117 \@pdfm@mark{%
11118 ann \ifnum\Fld@listcount=1 @radio\HyField@TheAnnotCount\space\fi
11119 \dvi pdfm@setdim
11120 <<%
11121 \PDFForm@Radio
11122 /AP<</N<</\@currValue /null>>>>%
11123 >>%
11124 }%
11125 \unhcopy\pdfm@box\space% deliberate space between radio buttons
11126 \ifnum\Fld@listcount=1 %
11127 \@pdfm@mark{put @afields @radio\HyField@TheAnnotCount}%
11128 \fi
11129 }%
11130 }

```

```

\Fld@listcount
11131 \newcount\Fld@listcount

@@Listbox
11132 \def\@@Listbox#1{%
11133   \HyField@PDFChoices{#1}%
11134   \setbox\pdfm@box=\hbox{\MakeChoiceField{\Fld@width}{\Fld@height}}%
11135   \leavevmode
11136   \Hy@escapeform\PDFForm@List
11137   \HyField@AdvanceAnnotCount
11138   \@pdfm@mark{%
11139     ann @list\HyField@TheAnnotCount\space
11140     \dvi pdfm@setdim
11141     <<\PDFForm@List>>%
11142   }%
11143   \unhbox\pdfm@box
11144   \@pdfm@mark{put @afields @list\HyField@TheAnnotCount}%
11145 }

@PushButton
11146 \def\@PushButton[#1]#2{% parameters, label
11147   \def\Fld@name{#2}%
11148   \begingroup
11149     \Field@toks={ }%
11150     \expandafter\HyField@SetKeys\expandafter{%
11151       \DefaultOptionsofPushButton,#1%
11152     }%
11153     \PDFForm@Name
11154     \ifHy@pdfa
11155       \PackageError{hyperref}{%
11156         PDF/A: Push button with JavaScript is prohibited%
11157       }\@ehc
11158       \LayoutPushButtonField{%
11159         \leavevmode
11160         \MakeButtonField{#2}%
11161       }%
11162     \else
11163       \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
11164       \HyField@FlagsPushButton
11165       \ifFld@hidden\def\Fld@width{1sp}\fi
11166       \HyField@AdvanceAnnotCount
11167       \LayoutPushButtonField{%
11168         \leavevmode
11169         \Hy@escapeform\PDFForm@Push
11170         \@pdfm@mark{%
11171           ann @push\HyField@TheAnnotCount\space
11172           \dvi pdfm@setdim
11173           <<\PDFForm@Push>>%
11174         }%
11175       }%
11176       \unhbox\pdfm@box
11177       \@pdfm@mark{put @afields @push\HyField@TheAnnotCount}%
11178     \fi
11179   \endgroup
11180 }

@Submit

```

```

11181 \def \@Submit[#1]#2{%
11182   \Field@toks={ }%
11183   \def \Fld@width{\DefaultWidthofSubmit}%
11184   \def \Fld@height{\DefaultHeightofSubmit}%
11185   \begingroup
11186     \expandafter\HyField@SetKeys\expandafter{%
11187       \DefaultOptionsofSubmit,#1%
11188     }%
11189     \HyField@FlagsPushButton
11190     \HyField@FlagsSubmit
11191     \ifFld@hidden\def \Fld@width{1sp}\fi
11192     \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
11193     \leavevmode
11194     \Hy@escapeform\PDFForm@Submit
11195     \HyField@AdvanceAnnotCount
11196     \@pdfm@mark{%
11197       ann @submit\HyField@TheAnnotCount\space
11198       \dvi pdfm@setdim
11199       <<\PDFForm@Submit>>%
11200     }%
11201     \unhbox\pdfm@box%
11202     \@pdfm@mark{put @afields @submit\HyField@TheAnnotCount}%
11203   \endgroup
11204 }

\@Reset
11205 \def \@Reset[#1]#2{%
11206   \Field@toks={ }%
11207   \def \Fld@width{\DefaultWidthofReset}%
11208   \def \Fld@height{\DefaultHeightofReset}%
11209   \begingroup
11210     \expandafter\HyField@SetKeys\expandafter{%
11211       \DefaultOptionsofReset,#1%
11212     }%
11213     \leavevmode
11214     \ifHy@pdfa
11215       \PackageError{hyperref}{%
11216         PDF/A: Reset action is prohibited%
11217       }\@ehc
11218       \MakeButtonField{#2}%
11219     \else
11220       \HyField@FlagsPushButton
11221       \ifFld@hidden\def \Fld@width{1sp}\fi
11222       \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
11223       \Hy@escapeform\PDFForm@Reset
11224       \HyField@AdvanceAnnotCount
11225       \@pdfm@mark{%
11226         ann @reset\HyField@TheAnnotCount\space
11227         \dvi pdfm@setdim
11228         <<\PDFForm@Reset>>%
11229       }%
11230       \unhbox\pdfm@box
11231       \@pdfm@mark{put @afields @reset\HyField@TheAnnotCount}%
11232     \fi
11233   \endgroup
11234 }

```

\@CheckBox

```
11235 \def\@CheckBox[#1]#2{% parameters, label
11236   \def\Fld@name{#2}%
11237   \def\Fld@default{0}%
11238   \begingroup
11239     \def\Fld@width{\DefaultWidthofCheckBox}%
11240     \def\Fld@height{\DefaultHeightofCheckBox}%
11241     \Field@toks={ }%
11242     \expandafter\HyField@SetKeys\expandafter{%
11243       \DefaultOptionsofCheckBox,#1%
11244     }%
11245     \PDFForm@Name
11246     \HyField@FlagsCheckBox
11247     \ifFld@hidden\def\Fld@width{1sp}\fi
11248     \setbox\pdfm@box=\hbox{\MakeCheckField{\Fld@width}{\Fld@height}}%
11249     \HyField@AdvanceAnnotCount
11250     \LayoutCheckField{#2}{%
11251       \Hy@escapeform\PDFForm@Check
11252       \@pdfm@mark{%
11253         ann @check\HyField@TheAnnotCount\space
11254         \dvipdfm@setdim
11255         <<\PDFForm@Check>>%
11256       }%
11257       \unhbox\pdfm@box
11258       \@pdfm@mark{put @afields @check\HyField@TheAnnotCount}%
11259     }%
11260   \endgroup
11261 }

11262 \@pdfm@mark{obj @OBJpdfdocencoding%
11263 <<%
11264   /Type/Encoding%
11265   /Differences[%
11266     24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring/tilde %
11267     39/quotesingle %
11268     96/grave %
11269     128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
11270     /fraction/guilsinglleft/guilsinglright/minus/perthousand%
11271     /quotedblbase/quotedblleft/quotedblright/quoteleft/quoteright%
11272     /quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron/Ydieresis%
11273     /Zcaron/dotlessi/lslash/oe/scaron/zcaron %
11274     164/currency %
11275     166/brokenbar %
11276     168/dieresis/copyright/ordfeminine %
11277     172/logicalnot/.notdef/registered/macron/degree/plusminus%
11278     /twosuperior/threesuperior/acute/mu %
11279     183/periodcentered/cedilla/onesuperior/ordmasculine %
11280     188/onequarter/onehalf/threequarters %
11281     192/Agave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
11282     /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave/Iacute%
11283     /Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute/Ocircumflex%
11284     /Otilde/Odieresis/multiply/Oslash/Ugrave/Uacute/Ucircumflex%
11285     /Udieresis/Yacute/Thorn/germandbls/agrave/aacute/acircumflex%
11286     /atilde/adieresis/aring/ae/ccedilla/egrave/eacute%
11287     /ecircumflex/edieresis/igrave/iacute/icircumflex/idieresis%
11288     /eth/ntilde/ograve/oacute/ocircumflex/otilde/odieresis%
11289     /divide/oslash/ugrave/uacute/ucircumflex/udieresis/yacute%
```

```

11290      /thorn/ydieresis%
11291    ]%
11292  >>%
11293 }
11294 \@pdfm@mark{obj @OBJZaDb%
11295 <<%
11296   /Type/Font%
11297   /Subtype/Type1%
11298   /Name/ZaDb%
11299   /BaseFont/ZapfDingbats%
11300 >>%
11301 }
11302 \@pdfm@mark{obj @OBJHelv%
11303 <<%
11304   /Type/Font%
11305   /Subtype/Type1%
11306   /Name/Helv%
11307   /BaseFont/Helvetica%
11308   /Encoding @OBJpdfdocencoding%
11309 >>%
11310 }
11311 </dvipdfm>

```

47.6 Common forms part

```
11312 < *pdfform >
```

\Hy@escapestring

```

11313 \begingroup\expandafter\expandafter\expandafter\endgroup
11314 \expandafter\ifx\csname pdfescapestring\endcsname\relax
11315   \let\Hy@escapestring\@firstofone
11316   \def\Hy@escapeform#1{%
11317     \ifHy@escapeform
11318       \def\Hy@escapestring##1{%
11319         \noexpand\Hy@escapestring{\noexpand##1}%
11320       }%
11321       \edef\Hy@temp{#1}%
11322       \expandafter\Hy@@escapeform\Hy@temp\Hy@escapestring{}\@nil
11323     \def\Hy@escapestring##1{%
11324       \@ifundefined{Hy@esc@\string##1}{%
11325         ##1%
11326         \ThisShouldNotHappen
11327       }{%
11328         \csname Hy@esc@\string##1\endcsname
11329       }%
11330     }%
11331   \else
11332     \let\Hy@escapestring\@firstofone
11333   \fi
11334 }%
11335 \def\Hy@@escapeform#1\Hy@escapestring#2#3\@nil{%
11336   \ifx\#3\%
11337   \else
11338     \expandafter\Hy@pstringdef\csname Hy@esc@\string#2\endcsname{#2}%
11339     \Hy@ReturnAfterFi{%
11340       \Hy@@escapeform#3\@nil
11341     }%

```

```

11342     \fi
11343   }%
11344 \else
11345   \def\Hy@escapeform#1{%
11346     \ifHy@escapeform
11347       \let\Hy@escapestring\pdfescapestring
11348     \else
11349       \let\Hy@escapestring\@firstofone
11350     \fi
11351   }%
11352   \Hy@escapeform{}}%
11353 \fi

```

\PDFForm@Name

```

11354 \def\PDFForm@Name{%
11355   \begingroup
11356     \ifnum\Hy@pdfversion<5 % implementation note 117, PDF spec 1.7
11357       \ifHy@unicode
11358         \Hy@unicodetrue
11359       \fi
11360     \fi
11361     \pdfstringdef\Hy@gtemp\Fld@name
11362   \endgroup
11363   \let\Fld@name\Hy@gtemp
11364 }

```

\PDFForm@Check

```

11365 \def\PDFForm@Check{%
11366   /Subtype/Widget%
11367   \Fld@annotflags
11368   /T(\Fld@name)%
11369   /FT/Btn%
11370   \Fld@flags
11371   /Q \Fld@align
11372   /BS<</W \Fld@borderwidth /S/\Fld@borderstyle>>%
11373   /MK<<%
11374     \ifnum\Fld@rotation=\z@
11375     \else
11376       /R \Fld@rotation
11377     \fi
11378     \ifx\Fld@bordercolor\relax
11379     \else
11380       /BC[\Fld@bordercolor]%
11381     \fi
11382     \ifx\Fld@bcolor\relax
11383     \else
11384       /BG[\Fld@bcolor]%
11385     \fi
11386     /CA(\Hy@escapestring{\Fld@cbsymbol})%
11387   >>%
11388   /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
11389     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
11390   /H/P%
11391   \ifFld@checked /V/Yes\else /V/Off\fi
11392 }

```

\PDFForm@Push


```

11393 \ifHy@pdfa
11394 \else
11395   \def\PDFForm@Push{%
11396     /Subtype/Widget%
11397     \Fld@annotflags
11398     /T(\Fld@name)%
11399     /FT/Btn%
11400     \Fld@flags
11401     /H/P%
11402     /BS<</W \Fld@borderwidth/S\Fld@borderstyle>>%
11403     \ifcase0\ifnum\Fld@rotation=\z@   \else 1\fi
11404       \ifx\Fld@bordercolor\relax\else 1\fi
11405       \space
11406     \else
11407       /MK<<%
11408         \ifnum\Fld@rotation=\z@
11409         \else
11410           /R \Fld@rotation
11411         \fi
11412         \ifx\Fld@bordercolor\relax
11413         \else
11414           /BC[\Fld@bordercolor]%
11415         \fi
11416       >>%
11417     \fi
11418     /A<</S/JavaScript/JS(\Hy@escapestring{\Fld@onclick})>>%
11419   }%
11420 \fi

```

\Fld@additionalactions

```

11421 \def\Fld@@additionalactions{%
K input (keystroke) format
11422 \ifx\Fld@keystroke@code\@empty
11423 \else
11424   /K<</S/JavaScript/JS(\Hy@escapestring{\Fld@keystroke@code})>>%
11425 \fi
F display format
11426 \ifx\Fld@format@code\@empty
11427 \else
11428   /F<</S/JavaScript/JS(\Hy@escapestring{\Fld@format@code})>>%
11429 \fi
V validation
11430 \ifx\Fld@validate@code\@empty
11431 \else
11432   /V<</S/JavaScript/JS(\Hy@escapestring{\Fld@validate@code})>>%
11433 \fi
C calculation
11434 \ifx\Fld@calculate@code\@empty
11435 \else
11436   /C<</S/JavaScript/JS(\Hy@escapestring{\Fld@calculate@code})>>%
11437 \fi
Fo receiving the input focus
11438 \ifx\Fld@onfocus@code\@empty
11439 \else

```

```

11440     /Fo<</S/JavaScript/JS(\Hy@escapestring{\Fld@onfocus@code})>>%
11441     \fi
Bl loosing the input focus (blurred)
11442     \ifx\Fld@onblur@code\@empty
11443     \else
11444         /Bl<</S/JavaScript/JS(\Hy@escapestring{\Fld@onblur@code})>>%
11445     \fi
D pressing the mouse button (down)
11446     \ifx\Fld@onmousedown@code\@empty
11447     \else
11448         /D<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmousedown@code})>>%
11449     \fi
U releasing the mouse button (up)
11450     \ifx\Fld@onmouseup@code\@empty
11451     \else
11452         /U<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmouseup@code})>>%
11453     \fi
E cursor enters the annotation's active area.
11454     \ifx\Fld@onenter@code\@empty
11455     \else
11456         /E<</S/JavaScript/JS(\Hy@escapestring{\Fld@onenter@code})>>%
11457     \fi
X cursor exits the annotation's active area.
11458     \ifx\Fld@onexit@code\@empty
11459     \else
11460         /X<</S/JavaScript/JS(\Hy@escapestring{\Fld@onexit@code})>>%
11461     \fi
11462 }
11463 \def\Fld@additionalactions{%
11464     \if-\Fld@@additionalactions-%
11465     \else
11466         \ifHy@pdfa
11467         \else
11468             /AA<<\Fld@@additionalactions>>%
11469         \fi
11470     \fi
11471 }

```

\PDFForm@List

```

11472 \def\PDFForm@List{%
11473     /Subtype/Widget%
11474     \Fld@annotflags
11475     /T(\Fld@name)%
11476     /FT/Ch%
11477     \Fld@flags
11478     /Q \Fld@align
11479     /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
11480     \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
11481         \ifx\Fld@bordercolor\relax\else 1\fi
11482         \ifx\Fld@bcolor\relax \else 1\fi
11483         \space
11484     \else
11485         /MK<<%
11486         \ifnum\Fld@rotation=\z@

```

```

11487     \else
11488         /R \Fld@rotation
11489     \fi
11490     \ifx\Fld@bordercolor\relax
11491     \else
11492         /BC[\Fld@bordercolor]%
11493     \fi
11494     \ifx\Fld@bcolor\relax
11495     \else
11496         /BG[\Fld@bcolor]%
11497     \fi
11498     >>%
11499 \fi
11500 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
11501     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
11502 \Fld@choices
11503 \Fld@additionalactions
11504 }

```

\PDFForm@Radio

```

11505 \def\PDFForm@Radio{%
11506     /Subtype/Widget%
11507     \Fld@annotflags
11508     /T(\Fld@name)%
11509     /FT/Btn%
11510     \Fld@flags
11511     /H/P%
11512     /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
11513     /MK<<%
11514         \ifnum\Fld@rotation=\z@
11515         \else
11516             /R \Fld@rotation
11517         \fi
11518         \ifx\Fld@bordercolor\relax
11519         \else
11520             /BC[\Fld@bordercolor]%
11521         \fi
11522         \ifx\Fld@bcolor\relax
11523         \else
11524             /BG[\Fld@bcolor]%
11525         \fi
11526         /CA(H)%
11527     >>%
11528     /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
11529         \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
11530     \ifx\@currValue\Fld@default
11531         /V/\Fld@default
11532     \else
11533         /V/Off%
11534     \fi
11535     \Fld@additionalactions
11536 }

```

\PDFForm@Text

```

11537 \def\PDFForm@Text{%
11538     /Subtype/Widget%
11539     \Fld@annotflags

```

```

11540 /T(\Fld@name)%
11541 /FT/Tx%
11542 \Fld@flags
11543 /Q \Fld@align
11544 /BS<</W \Fld@borderwidth\space /S /\Fld@borderstyle>>%
11545 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
11546 \ifx\Fld@bordercolor\relax\else 1\fi
11547 \ifx\Fld@bcolor\relax \else 1\fi
11548 \space
11549 \else
11550 /MK<<%
11551 \ifnum\Fld@rotation=\z@
11552 \else
11553 /R \Fld@rotation
11554 \fi
11555 \ifx\Fld@bordercolor\relax
11556 \else
11557 /BC[\Fld@bordercolor]%
11558 \fi
11559 \ifx\Fld@bcolor\relax
11560 \else
11561 /BG[\Fld@bcolor]%
11562 \fi
11563 >>%
11564 \fi
11565 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
11566 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
11567 /DV(\Hy@escapestring{\Fld@default})%
11568 /V(\Hy@escapestring{\Fld@value})%
11569 \Fld@additionalactions
11570 \ifnum\Fld@maxlen>\z@/MaxLen \Fld@maxlen \fi
11571 }

```

\PDFForm@Submit

```

11572 \def\PDFForm@Submit{%
11573 /Subtype/Widget%
11574 \Fld@annotflags
11575 /T(\Fld@name)%
11576 /FT/Btn%
11577 \Fld@flags
11578 /H/P%
11579 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
11580 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
11581 \ifx\Fld@bordercolor\relax\else 1\fi
11582 \space
11583 \else
11584 /MK<<%
11585 \ifnum\Fld@rotation=\z@
11586 \else
11587 /R \Fld@rotation
11588 \fi
11589 \ifx\Fld@bordercolor\relax
11590 \else
11591 /BC[\Fld@bordercolor]%
11592 \fi
11593 >>%
11594 \fi

```

```

11595 /A<<%
11596 /S/SubmitForm%
11597 /F<<%
11598 /FS/URL%
11599 /F(\Hy@escapestring{\Form@action})%
11600 >>%
11601 \Fld@submitflags
11602 >>%
11603 }

\PDFForm@Reset

11604 \ifHy@pdfa
11605 \else
11606 \def\PDFForm@Reset{%
11607 /Subtype/Widget%
11608 \Fld@annotflags
11609 /T(\Fld@name)%
11610 /FT/Btn%
11611 \Fld@flags
11612 /H/P%
11613 /DA(/Helv \strip@pt\Fld@charsize\space Tf 0 0 1 rg)%
11614 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
11615 \ifx\Fld@bordercolor\relax\else 1\fi
11616 \space
11617 \else
11618 /MK<<%
11619 \ifnum\Fld@rotation=\z@
11620 \else
11621 /R \Fld@rotation
11622 \fi
11623 \ifx\Fld@bordercolor\relax
11624 \else
11625 /BC[\Fld@bordercolor]%
11626 \fi
11627 % /CA (Clear)
11628 % /AC (Done)
11629 >>%
11630 \fi
11631 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
11632 /A<</S/ResetForm>>%
11633 }%
11634 \fi

11635 </pdfform>
11636 <*package>

```

48 Bookmarks in the PDF file

This was originally developed by Yannis Haralambous (it was the separate `repere.sty`); it needed the `repere` or `makebook.pl` post-processor to work properly. Now redundant, as it is done entirely in \LaTeX macros.

To write out the current section title, and its rationalized number, we have to intercept the `\@sect` command, which is rather dangerous. But how else to see the information we need? We do the *same* for `\@ssect`, giving anchors to unnumbered sections. This allows things like bibliographies to get bookmarks when used with a manual `\addcontentsline`

```

11637 \def\phantomsection{%
11638   \Hy@GlobalStepCount\Hy@linkcounter
11639   \xdef\@currentHref{section*.\the\Hy@linkcounter}%
11640   \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
11641 }
11642 \</package>

```

48.1 Bookmarks

```

11643 \<*outlines>

```

This section was written by Heiko Oberdiek; the code replaces an earlier version by David Carlisle.

The first part of bookmark code is in section 6. Further documentation is available as paper.pdf and slides.pdf in the doc directory of hyperref.

```

11644 \def\Hy@writebookmark#1#2#3#4#5{%
11645   % section number, text, label, level, file
11646   \ifx\WriteBookmarks\relax%
11647   \else
11648     \ifnum#4>\Hy@bookmarksdepth\relax
11649     \else
11650       \@@writetorep{#1}{#2}{#3}{#4}{#5}%
11651     \fi
11652   \fi
11653 }
11654 \def\Hy@currentbookmarklevel{0}
11655 \def\Hy@numberline#1{#1 }
11656 \def\@@writetorep#1#2#3#4#5{%
11657   \begingroup
11658     \edef\Hy@tempa{#5}%
11659     \ifx\Hy@tempa\Hy@bookmarkstype
11660       \edef\Hy@level{#4}%
11661       \ifx\Hy@levelcheck Y%
11662         \@tempcnta\Hy@level\relax
11663         \advance\@tempcnta by -1 %
11664         \ifnum\Hy@currentbookmarklevel<\@tempcnta
11665           \advance\@tempcnta by -\Hy@currentbookmarklevel\relax
11666           \advance\@tempcnta by 1 %
11667           \Hy@Warning{%
11668             Difference (\the\@tempcnta) between bookmark levels is %
11669             greater \MessageBreak than one, level fixed%
11670           }%
11671           \@tempcnta\Hy@currentbookmarklevel
11672           \advance\@tempcnta by 1 %
11673           \edef\Hy@level{\the\@tempcnta}%
11674         \fi
11675       \else
11676         \global\let\Hy@levelcheck Y%
11677       \fi
11678       \global\let\Hy@currentbookmarklevel\Hy@level
11679       \@tempcnta\Hy@level\relax
11680       \expandafter\xdef\csname Parent\Hy@level\endcsname{#3}%
11681       \advance\@tempcnta by -1 %
11682       \edef\Hy@tempa{#3}%
11683       \edef\Hy@tempb{\csname Parent\the\@tempcnta\endcsname}%
11684       \ifx\Hy@tempa\Hy@tempb

```

```

11685      \Hy@Warning{%
11686          The anchor of a bookmark and its parent's must not%
11687          \MessageBreak be the same. Added a new anchor%
11688      }%
11689      \phantomsection
11690  \fi
11691  \ifHy@bookmarksnumbered
11692      \let\numberline\Hy@numberline
11693      \let\partnumberline\Hy@numberline
11694      \let\chapternumberline\Hy@numberline
11695  \else
11696      \let\numberline\@gobble
11697      \let\partnumberline\@gobble
11698      \let\chapternumberline\@gobble
11699  \fi
11700  \pdfstringdef\Hy@tempa{#2}%
11701  \if@files
11702      \protected@write\@outlinefile{}{%
11703          \protect\BOOKMARK
11704              [\Hy@level] [\@bookmarkopenstatus{\Hy@level}]{#3}%
11705              {\Hy@tempa}{\Hy@tempb}%
11706      }%
11707  \fi
11708  \fi
11709  \endgroup
11710 }

```

In the call of `\BOOKMARK` the braces around #4 are omitted, because it is not likely, that the level number contains] .

```

11711 \newcommand{\currentpdfbookmark}{%
11712     \pdfbookmark[\Hy@currentbookmarklevel]%
11713 }
11714 \newcommand{\subpdfbookmark}{%
11715     \@tempcnta\Hy@currentbookmarklevel
11716     \Hy@StepCount\@tempcnta
11717     \expandafter\pdfbookmark\expandafter[\the\@tempcnta]%
11718 }
11719 \newcommand{\belowpdfbookmark}[2]{%
11720     \@tempcnta\Hy@currentbookmarklevel
11721     \Hy@StepCount\@tempcnta
11722     \expandafter\pdfbookmark\expandafter[\the\@tempcnta]{#1}{#2}%
11723     \advance\@tempcnta by -1 %
11724     \xdef\Hy@currentbookmarklevel{\the\@tempcnta}%
11725 }

```

Tobias Oetiker rightly points out that we need a way to force a bookmark entry. So we introduce `\pdfbookmark`, with two parameters, the title, and a symbolic name. By default this is at level 1, but we can reset that with the optional first argument.

```

11726 \renewcommand\pdfbookmark[3][0]{%
11727     \Hy@writebookmark{#2}{#3.#1}{#1}{toc}%
11728     \hyper@anchorstart{#3.#1}\hyper@anchorend
11729 }
11730 \def\BOOKMARK{\@ifnextchar[{\@BOOKMARK}{\@BOOKMARK[1] [-]}}
11731 \def\@BOOKMARK[#1]{\@ifnextchar[{\@BOOKMARK[#1] }{\@BOOKMARK[#1] [-]}}

```

The macros for calculating structure of outlines are derived from those by Petr Olsak used in the `texinfo` macros.

The VTEX section was written originally by VTEX, but then amended by Denis Girou (`denis.girou@idris.fr`), then by by Taco Hoekwater (`taco.hoekwater@wkap.nl`).

The problem is that VTeX, with its close integration of the PDF backend, does look at the contents of bookmarks, escaping \ and the like.

11732 < *vtex>

11733 \newcount\@serial@counter\@serial@counter=1\relax

\hv@pdf@char Plain octal codes doesn't work with versions below 6.50. So for early versions hex numbers have to be used. It would be possible to program this instead of the large \ifcase, but I'm too lazy to sort that out now.

11734 \begingroup

11735 \catcode'\'=12 %

11736 \ifnum\Hy@VTeXversion<650 %

11737 \catcode'\=12 %

11738 \gdef\hv@pdf@char#1#2#3{%

11739 \char

11740 \ifcase'#1#2#3 %

11741 "00\or"01\or"02\or"03\or"04\or"05\or"06\or"07%

11742 \or"08\or"09\or"0A\or"0B\or"0C\or"0D\or"0E\or"0F%

11743 \or"10\or"11\or"12\or"13\or"14\or"15\or"16\or"17%

11744 \or"18\or"19\or"1A\or"1B\or"1C\or"1D\or"1E\or"1F%

11745 \or"20\or"21\or"22\or"23\or"24\or"25\or"26\or"27%

11746 \or"28\or"29\or"2A\or"2B\or"2C\or"2D\or"2E\or"2F%

11747 \or"30\or"31\or"32\or"33\or"34\or"35\or"36\or"37%

11748 \or"38\or"39\or"3A\or"3B\or"3C\or"3D\or"3E\or"3F%

11749 \or"40\or"41\or"42\or"43\or"44\or"45\or"46\or"47%

11750 \or"48\or"49\or"4A\or"4B\or"4C\or"4D\or"4E\or"4F%

11751 \or"50\or"51\or"52\or"53\or"54\or"55\or"56\or"57%

11752 \or"58\or"59\or"5A\or"5B\or"5C\or"5D\or"5E\or"5F%

11753 \or"60\or"61\or"62\or"63\or"64\or"65\or"66\or"67%

11754 \or"68\or"69\or"6A\or"6B\or"6C\or"6D\or"6E\or"6F%

11755 \or"70\or"71\or"72\or"73\or"74\or"75\or"76\or"77%

11756 \or"78\or"79\or"7A\or"7B\or"7C\or"7D\or"7E\or"7F%

11757 \or"80\or"81\or"82\or"83\or"84\or"85\or"86\or"87%

11758 \or"88\or"89\or"8A\or"8B\or"8C\or"8D\or"8E\or"8F%

11759 \or"90\or"91\or"92\or"93\or"94\or"95\or"96\or"97%

11760 \or"98\or"99\or"9A\or"9B\or"9C\or"9D\or"9E\or"9F%

11761 \or"A0\or"A1\or"A2\or"A3\or"A4\or"A5\or"A6\or"A7%

11762 \or"A8\or"A9\or"AA\or"AB\or"AC\or"AD\or"AE\or"AF%

11763 \or"B0\or"B1\or"B2\or"B3\or"B4\or"B5\or"B6\or"B7%

11764 \or"B8\or"B9\or"BA\or"BB\or"BC\or"BD\or"BE\or"BF%

11765 \or"C0\or"C1\or"C2\or"C3\or"C4\or"C5\or"C6\or"C7%

11766 \or"C8\or"C9\or"CA\or"CB\or"CC\or"CD\or"CE\or"CF%

11767 \or"D0\or"D1\or"D2\or"D3\or"D4\or"D5\or"D6\or"D7%

11768 \or"D8\or"D9\or"DA\or"DB\or"DC\or"DD\or"DE\or"DF%

11769 \or"E0\or"E1\or"E2\or"E3\or"E4\or"E5\or"E6\or"E7%

11770 \or"E8\or"E9\or"EA\or"EB\or"EC\or"ED\or"EE\or"EF%

11771 \or"F0\or"F1\or"F2\or"F3\or"F4\or"F5\or"F6\or"F7%

11772 \or"F8\or"F9\or"FA\or"FB\or"FC\or"FD\or"FE\or"FF%

11773 \fi

11774 }%

11775 \else

11776 \gdef\hv@pdf@char{\char'}%

11777 \fi

11778 \endgroup

\@@BOOKMARK

11779 \def\@@BOOKMARK[#1][#2]#3#4#5{%

11780 \expandafter\edef\csname @count#3\endcsname{\the\@serial@counter}%


```

11781 \edef\@mycount{\the\@serial@counter}%
11782 \Hy@StepCount\@serial@counter
11783 \edef\@parcount{%
11784   \expandafter\ifx\csname @count@#5\endcsname\relax
11785     0%
11786   \else
11787     \csname @count@#5\endcsname
11788   \fi
11789 }%
11790 \immediate\special{%
11791   !outline \HyperDestNameFilter{#3};p=\@parcount,i=\@mycount,%
11792   s=\ifx#2-c\else o\fi,t=#4%
11793 }%
11794 }%

```

\ReadBookmarks

```

11795 \def\ReadBookmarks{%
11796   \begingroup
11797   \def\O{\hv@pdf@char 0}%
11798   \def\1{\hv@pdf@char 1}%
11799   \def\2{\hv@pdf@char 2}%
11800   \def\3{\hv@pdf@char 3}%
11801   \def\({}%
11802   \def\)}%
11803   \def\do##1{%
11804     \ifnum\the\catcode'##1=\active
11805       \makeother##1%
11806     \fi
11807   }%
11808   \dospecials
11809   \InputIfFileExists{\jobname.out}{\}{}%
11810 \endgroup
11811 \ifx\WriteBookmarks\relax
11812 \else
11813   \if@filesw
11814     \newwrite\@outlinefile
11815     \immediate\openout\@outlinefile=\jobname.out\relax
11816     \ifHy@typexml
11817       \immediate\write\@outlinefile{<relaxxml>\relax}%
11818     \fi
11819   \fi
11820 \fi
11821 }

11822 </vtex>
11823 <*\vtex>
11824 \def\ReadBookmarks{%
11825   \begingroup
11826   \escapechar='\\%
11827   \let\escapechar\@gobble %
11828   \def\@@BOOKMARK[##1][##2]##3##4##5{\calc@bm@number{##5}}%
11829   \InputIfFileExists{\jobname.out}{\}{}%
11830   \ifx\WriteBookmarks\relax
11831     \global\let\WriteBookmarks\relax
11832   \fi
11833   \def\@@BOOKMARK[##1][##2]##3##4##5{%
11834     \def\Hy@temp{##4}%

```

```

11835 <*pdftex>
11836     \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
11837     \Hy@OutlineName{}\Hy@pstringName{%
11838         ##2\check@bm@number{##3}%
11839     }{%
11840         \expandafter\strip@prefix\meaning\Hy@temp
11841     }%
11842 </pdftex>
11843 <*pdfmark>
11844     \pdfmark{%
11845         pdfmark=/OUT,%
11846         Count={##2\check@bm@number{##3}},%
11847         Dest={##3},%
11848         Title=\expandafter\strip@prefix\meaning\Hy@temp
11849     }%
11850 </pdfmark>
11851 <*dvipdfm>
11852     \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
11853     \@pdfm@mark{%
11854         outline \ifHy@DvipdfmxOutlineOpen
11855             [%
11856             \ifnum##21>\z@
11857             \else
11858             -%
11859             \fi
11860             ] %
11861             \fi
11862             ##1<%
11863             /Title(\expandafter\strip@prefix\meaning\Hy@temp)%
11864             /A<%
11865             /S/GoTo%
11866             /D(\Hy@pstringName)%
11867             >>%
11868             >>%
11869         }%
11870 </dvipdfm>
11871     }%
11872     {%
11873         \def\WriteBookmarks{0}%
11874         \InputIfFileExists{\jobname.out}{\relax}%
11875     }%
11876     {%\escapechar\m@ne\InputIfFileExists{\jobname.out}{\relax}%
11877     \ifx\WriteBookmarks\relax
11878     \else
11879         \if@files
11880             \newwrite\@outlinefile
11881             \immediate\openout\@outlinefile=\jobname.out\relax
11882             \ifHy@typexml
11883                 \immediate\write\@outlinefile{<relaxxml>\relax}%
11884             \fi
11885             \fi
11886             \fi
11887         \endgroup
11888     }
11889 <*pdftex>
11890 \def\Hy@OutlineName#1#2#3#4{%
11891     \pdfoutline goto name{#2}count#3{#4}%

```

```

11892 }
11893 </pdfTeX>
11894 \def\check@bm@number#1{%
11895   \expandafter\ifx\csname B_#1\endcsname\relax
11896     0%
11897   \else
11898     \csname B_#1\endcsname
11899   \fi
11900 }
11901 \def\calc@bm@number#1{%
11902   \@tempcnta=\check@bm@number{#1}\relax
11903   \advance\@tempcnta by 1 %
11904   \expandafter\xdef\csname B_#1\endcsname{\the\@tempcnta}%
11905 }
11906 </!vTeX>

11907 \ifHy@implicit
11908 \else
11909   \expandafter\endinput
11910 \fi

11911 </outlines>
11912 <*outlines | hypertex>

11913 \let\H@old@ssect\@ssect
11914 \def\@ssect#1#2#3#4#5{%
11915   \H@old@ssect{#1}{#2}{#3}{#4}{#5}%
11916   \phantomsection
11917 }
11918 \let\H@old@schapter\@schapter
11919 \def\@schapter#1{%
11920   \H@old@schapter{#1}%
11921   \begingroup
11922     \let\mkboth\@gobbletwo
11923     \Hy@GlobalStepCount\Hy@linkcounter
11924     \xdef\@currentHref{\Hy@chapapp*.\the\Hy@linkcounter}%
11925     \Hy@raisedlink{%
11926       \hyper@anchorstart{\@currentHref}\hyper@anchorend
11927     }%
11928   \endgroup
11929 }

If there is no chapter number (\frontmatter or \backmatter) then \refstepcounter{chapter}
is not executed, so there will be no destination for \ddcontentsline. So \@chapter is
overloaded to avoid this:

11930 \ifundefined{@chapter}{-}{%
11931   \let\Hy@org@chapter\@chapter
11932   \def\@chapter{%
11933     \def\Hy@next{%
11934       \Hy@GlobalStepCount\Hy@linkcounter
11935       \xdef\@currentHref{\Hy@chapapp*.\the\Hy@linkcounter}%
11936       \Hy@raisedlink{%
11937         \hyper@anchorstart{\@currentHref}\hyper@anchorend
11938       }%
11939     }%
11940     \ifnum\c@secnumdepth>\m@ne
11941       \ifundefined{if@mainmatter}%
11942       \iftrue{\csname if@mainmatter\endcsname}%
11943       \let\Hy@next\relax

```

```

11944     \fi
11945     \fi
11946     \Hy@next
11947     \Hy@org@chapter
11948 }%
11949 }

11950 \let\H@old@part\@part
11951 \begingroup\expandafter\expandafter\expandafter\endgroup
11952 \expandafter\ifx\csname chapter\endcsname\relax
11953   \let\Hy@secnum@part\z@
11954 \else
11955   \let\Hy@secnum@part\m@ne
11956 \fi
11957 \def\@part{%
11958   \ifnum\Hy@secnum@part>\c@secnumdepth
11959     \phantomsection
11960   \fi
11961   \H@old@part
11962 }

11963 \let\H@old@spart\@spart
11964 \def\@spart#1{%
11965   \H@old@spart{#1}%
11966   \Hy@GlobalStepCount\Hy@linkcounter
11967   \xdef\@currentHref{part*.\the\Hy@linkcounter}%
11968   \Hy@raisedlink{%
11969     \hyper@anchorstart{\@currentHref}\hyper@anchorend
11970   }%
11971 }

11972 \let\H@old@sect\@sect
11973 \def\@sect#1#2#3#4#5#6[#7]#8{%
11974   \ifnum #2>\c@secnumdepth
11975     \Hy@GlobalStepCount\Hy@linkcounter
11976     \xdef\@currentHref{section*.\the\Hy@linkcounter}%
11977   \fi
11978   \H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}[#7]{#8}%
11979   \ifnum #2>\c@secnumdepth
11980     \Hy@raisedlink{%
11981       \hyper@anchorstart{\@currentHref}\hyper@anchorend
11982     }%
11983   \fi
11984 }

11985 </outlines | hypertex>
11986 <*outlines>

11987 \expandafter\def\csname Parent-4\endcsname{}
11988 \expandafter\def\csname Parent-3\endcsname{}
11989 \expandafter\def\csname Parent-2\endcsname{}
11990 \expandafter\def\csname Parent-1\endcsname{}
11991 \expandafter\def\csname Parent0\endcsname{}
11992 \expandafter\def\csname Parent1\endcsname{}
11993 \expandafter\def\csname Parent2\endcsname{}
11994 \expandafter\def\csname Parent3\endcsname{}
11995 \expandafter\def\csname Parent4\endcsname{}

11996 </outlines>

```

49 Compatibility with koma-script classes

11997 < *outlines | hypertex >

Hard-wire in an unpleasant over-ride of komascript ‘scrbook’ class for Tobias.Isenberg@gmx.de. With version 6.71b the hack is also applied to ‘scrreprt’ class and is removed for koma-script versions since 2001/01/01, because Markus Kohm supports hyperref in komascript.

```
11998 \def\Hy@tempa{%
11999   \def\@addchap[##1]##2{%
12000     \typeout{##2}%
12001     \if@twoside
12002       \mkboth{##1}{}%
12003     \else
12004       \mkboth{}{##1}%
12005     \fi
12006     \addtocontents{lof}{\protect\addvspace{10\p@}}%
12007     \addtocontents{lot}{\protect\addvspace{10\p@}}%
12008     \Hy@GlobalStepCount\Hy@linkcounter
12009     \xdef\@currentHref{\Hy@chapapp*.\the\Hy@linkcounter}%
12010     \Hy@raisedlink{%
12011       \hyper@anchorstart{\@currentHref}\hyper@anchorend
12012     }%
12013     \if@twocolumn
12014       \topnewpage[\@makeschapterhead{##2}]%
12015     \else
12016       \@makeschapterhead{##2}%
12017       \@afterheading
12018     \fi
12019     \addcontentsline{toc}{chapter}{##1}%
12020   }%
12021 }
12022 \@ifclassloaded{scrbook}{%
12023   \@ifclasslater{scrbook}{2001/01/01}{%
12024     \let\Hy@tempa\@empty
12025   }{}%
12026 }{%
12027   \@ifclassloaded{scrreprt}{%
12028     \@ifclasslater{scrreprt}{2001/01/01}{%
12029       \let\Hy@tempa\@empty
12030     }{}%
12031   }{%
12032     \let\Hy@tempa\@empty
12033   }%
12034 }%
12035 \Hy@tempa
12036 </outlines | hypertex >
```

50 Encoding definition files for encodings of PDF strings

This was contributed by Heiko Oberdiek oberdiek@ruf.uni-freiburg.de

50.1 PD1 encoding

```
12037 < *pd1enc >
12038 \DeclareFontEncoding{PD1}{}{}
```

Accents

```
12039 \DeclareTextAccent{\'}{PD1}{\textasciigrave}
```

```

12040 \DeclareTextAccent{'}{PD1}{\textacute}
12041 \DeclareTextAccent{^}{PD1}{\textasciicircum}
12042 \DeclareTextAccent{~}{PD1}{\texttilde}
12043 \DeclareTextAccent{"}{PD1}{\textasciidieresis}
12044 \DeclareTextAccent{r}{PD1}{\textring}
12045 \DeclareTextAccent{v}{PD1}{\textasciicaron}
12046 \DeclareTextAccent{.}{PD1}{\textdotaccent}
12047 \DeclareTextAccent{c}{PD1}{\textcedilla}
12048 \DeclareTextAccent{=}{PD1}{\textasciimacron}
12049 \DeclareTextAccent{b}{PD1}{\textmacronbelow}
12050 \DeclareTextAccent{d}{PD1}{\textdotbelow}
12051 \DeclareTextCompositeCommand{'}{PD1}{\@empty}{\textasciigrave}
12052 \DeclareTextCompositeCommand{^}{PD1}{\@empty}{\textacute}
12053 \DeclareTextCompositeCommand{^}{PD1}{\@empty}{\textasciicircum}
12054 \DeclareTextCompositeCommand{~}{PD1}{\@empty}{\texttilde}
12055 \DeclareTextCompositeCommand{"}{PD1}{\@empty}{\textasciidieresis}
12056 \DeclareTextCompositeCommand{r}{PD1}{\@empty}{\textring}
12057 \DeclareTextCompositeCommand{v}{PD1}{\@empty}{\textasciicaron}
12058 \DeclareTextCompositeCommand{.}{PD1}{\@empty}{\textdotaccent}
12059 \DeclareTextCompositeCommand{c}{PD1}{\@empty}{\textcedilla}
12060 \DeclareTextCompositeCommand{=}{PD1}{\@empty}{\textasciimacron}
12061 \DeclareTextCompositeCommand{b}{PD1}{\@empty}{\textmacronbelow}
12062 \DeclareTextCompositeCommand{d}{PD1}{\@empty}{\textdotbelow}
12063 \DeclareTextCompositeCommand{'}{PD1}{\ }{\textasciigrave}
12064 \DeclareTextCompositeCommand{^}{PD1}{\ }{\textacute}
12065 \DeclareTextCompositeCommand{^}{PD1}{\ }{\textasciicircum}
12066 \DeclareTextCompositeCommand{~}{PD1}{\ }{\texttilde}
12067 \DeclareTextCompositeCommand{"}{PD1}{\ }{\textasciidieresis}
12068 \DeclareTextCompositeCommand{r}{PD1}{\ }{\textring}
12069 \DeclareTextCompositeCommand{v}{PD1}{\ }{\textasciicaron}
12070 \DeclareTextCompositeCommand{.}{PD1}{\ }{\textdotaccent}
12071 \DeclareTextCompositeCommand{c}{PD1}{\ }{\textcedilla}
12072 \DeclareTextCompositeCommand{=}{PD1}{\ }{\textasciimacron}
12073 \DeclareTextCompositeCommand{b}{PD1}{\ }{\textmacronbelow}
12074 \DeclareTextCompositeCommand{d}{PD1}{\ }{\textdotbelow}
12075 \DeclareTextCommand{k}{PD1}[1]{\TextSymbolUnavailable{k#1}}#1}
12076 \DeclareTextCommand{t}{PD1}[1]{\TextSymbolUnavailable{t#1}}#1}
12077 \DeclareTextCommand{newtie}{PD1}[1]{\TextSymbolUnavailable{newtie#1}}#1}

```

Special white space escape characters not for use in bookmarks but for other PDF strings.

```

12078 % U+0009 (CHARACTER TABULATION)
12079 \DeclareTextCommand{texHT}{PD1}{\011}% U+0009
12080 % U+000A (LINE FEED)
12081 \DeclareTextCommand{texLF}{PD1}{\012}% U+000A
12082 % U+000D (CARRIAGE RETURN)
12083 \DeclareTextCommand{texCR}{PD1}{\015}% U+000D

```

Accent glyph names

```

12084 % U+02D8 BREVE; breve
12085 \DeclareTextCommand{textasciibreve}{PD1}{\030}% U+02D8
12086 % U+02C7 CARON; caron
12087 \DeclareTextCommand{textasciicaron}{PD1}{\031}% U+02C7
12088 % U+02C6 MODIFIER LETTER CIRCUMFLEX ACCENT; circumflex
12089 \DeclareTextCommand{textcircumflex}{PD1}{\032}% U+02C6
12090 % U+02D9 DOT ABOVE; dotaccent
12091 \DeclareTextCommand{textdotaccent}{PD1}{\033}% U+02D9
12092 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
12093 \DeclareTextCommand{texthungarumlaut}{PD1}{\034}% U+02DD
12094 % U+02DB OGONEK; ogonek

```

12095 \DeclareTextCommand{\textogonek}{PD1}{\035}% U+02DB
 12096 % U+02DA RING ABOVE; ring
 12097 \DeclareTextCommand{\textring}{PD1}{\036}% U+02DA
 12098 % U+02DC SMALL TILDE; ilde, *tilde
 12099 \DeclareTextCommand{\texttilde}{PD1}{\037}% U+02DC
 \040: U+0020 SPACE; *space, spacehackarabic
 \041: U+0021 EXCLAMATION MARK; exclam
 12100 % U+0022 QUOTATION MARK; quotedbl
 12101 \DeclareTextCommand{\textquotedbl}{PD1}{\string"}% \042 U+0022
 12102 % U+0023 NUMBER SIGN; numbersign
 12103 \DeclareTextCommand{\textnumbersign}{PD1}{\043}% U+0023
 12104 % U+0024 DOLLAR SIGN; dollar
 12105 \DeclareTextCommand{\textdollar}{PD1}{\044}% U+0024
 12106 % U+0025 PERCENT SIGN; percent
 12107 \DeclareTextCommand{\textpercent}{PD1}{\045}% U+0025
 12108 % U+0026 AMPERSAND; ampersand
 12109 \DeclareTextCommand{\textampersand}{PD1}{\046}% U+0026
 \047: U+0027 APOSTROPHE; quotesingle

 12110 % U+0028 LEFT PARENTHESIS; parenleft
 12111 \DeclareTextCommand{\textparenleft}{PD1}{\string\(% \050 U+0028
 12112 % U+0029 RIGHT PARENTHESIS; parenright
 12113 \DeclareTextCommand{\textparenright}{PD1}{\string\)%} \051 U+0029
 \052: U+002A ASTERISK; asterisk
 \053: U+002B PLUS SIGN; plus
 \054: U+002C COMMA; comma
 \055: U+002D HYPHEN-MINUS; hyphen
 \056: U+002E FULL STOP; period
 12114 % U+002E FULL STOP; period
 12115 \DeclareTextCommand{\textdotbelow}{PD1}{.}% \056 U+002E
 \057: U+002F SOLIDUS; slash
 \060: U+0030 DIGIT ZERO; zero
 ...
 \071: U+0039 DIGIT NINE; nine
 \072: U+003A COLON; colon
 \073: U+003B SEMICOLON; semicolon
 12116 % U+003C LESS-THAN SIGN; less
 12117 \DeclareTextCommand{\textless}{PD1}{<}% \074 U+003C
 \075: U+003D EQUALS SIGN; equal
 12118 % U+003E GREATER-THAN SIGN; greater
 12119 \DeclareTextCommand{\textgreater}{PD1}{>}% \076 U+003E
 \077: U+003F QUESTION MARK; question
 \100: U+0040 COMMERCIAL AT; at
 \101: U+0041 LATIN CAPITAL LETTER A; A
 ...
 \132: U+005A LATIN CAPITAL LETTER Z; Z
 \133: U+005B LEFT SQUARE BRACKET; bracketleft
 12120 % U+005C REVERSE SOLIDUS; backslash
 12121 \DeclareTextCommand{\textbackslash}{PD1}{\134}% U+005C
 \135: U+005D RIGHT SQUARE BRACKET; bracketright
 12122 % U+005E CIRCUMFLEX ACCENT; asciicircum
 12123 \DeclareTextCommand{\textasciicircum}{PD1}{\136}% U+005E
 12124 % U+005F LOW LINE; underscore
 12125 \DeclareTextCommand{\textunderscore}{PD1}{\137}% U+005F

12126 \DeclareTextCommand{\textmacronbelow}{PD1}{\137}% U+005F
12127 % U+0060 GRAVE ACCENT; grave
12128 \DeclareTextCommand{\textasciigrave}{PD1}{\140}% U+0060
\141: U+0061 LATIN SMALL LETTER A; a
...
\150: U+0068 LATIN SMALL LETTER H; h
12129 % U+0069 LATIN SMALL LETTER I; i
12130 \DeclareTextCompositeCommand{.}{PD1}{i}{i}% \151 U+0069
\152: U+006A LATIN SMALL LETTER J; j
...
\172: U+007A LATIN SMALL LETTER Z; z
12131 % U+007B LEFT CURLY BRACKET; braceleft
12132 \DeclareTextCommand{\textbraceleft}{PD1}{\173}% U+007B
12133 % U+007C VERTICAL LINE; *bar, verticalbar
12134 \DeclareTextCommand{\textbar}{PD1}{|}% U+007C
12135 % U+007D RIGHT CURLY BRACKET; braceright
12136 \DeclareTextCommand{\textbraceright}{PD1}{\175}% U+007D
12137 % U+007E TILDE; asciitilde
12138 \DeclareTextCommand{\textasciitilde}{PD1}{\176}% U+007E
Slot \177 (0x7F) is undefined in PDFDocEncoding.
12139 % U+2022 BULLET; bullet
12140 \DeclareTextCommand{\textbullet}{PD1}{\200}% U+2022
12141 % U+2020 DAGGER; dagger
12142 \DeclareTextCommand{\textdagger}{PD1}{\201}% U+2020
12143 % U+2021 DOUBLE DAGGER; daggerdbl
12144 \DeclareTextCommand{\textdaggerdbl}{PD1}{\202}% U+2021
12145 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
12146 \DeclareTextCommand{\textellipsis}{PD1}{\203}% U+2026
12147 % U+2014 EM DASH; emdash
12148 \DeclareTextCommand{\textemdash}{PD1}{\204}% U+2014
12149 % U+2013 EN DASH; endash
12150 \DeclareTextCommand{\textendash}{PD1}{\205}% U+2013
12151 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
12152 \DeclareTextCommand{\textflorin}{PD1}{\206}% U+0192
12153 % U+2044 FRACTION SLASH; fraction
12154 \DeclareTextCommand{\textfractionsolidus}{PD1}{\207}% U+2044
12155 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guilsinglleft
12156 \DeclareTextCommand{\guilsinglleft}{PD1}{\210}% U+2039
12157 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guilsinglright
12158 \DeclareTextCommand{\guilsinglright}{PD1}{\211}% U+203A
12159 % U+2212 MINUS SIGN; minus
12160 \DeclareTextCommand{\textminus}{PD1}{\212}% U+2212
12161 % U+2030 PER MILLE SIGN; perthousand
12162 \DeclareTextCommand{\textperthousand}{PD1}{\213}% U+2030
12163 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
12164 \DeclareTextCommand{\quotedblbase}{PD1}{\214}% U+201E
12165 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
12166 \DeclareTextCommand{\textquotedblleft}{PD1}{\215}% U+201C
12167 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
12168 \DeclareTextCommand{\textquotedblright}{PD1}{\216}% U+201D
12169 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
12170 \DeclareTextCommand{\textquoteleft}{PD1}{\217}% U+2018
12171 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
12172 \DeclareTextCommand{\textquoteright}{PD1}{\220}% U+2019
12173 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
12174 \DeclareTextCommand{\quotesinglbase}{PD1}{\221}% U+201A

12175 % U+2122 TRADE MARK SIGN; trademark
12176 \DeclareTextCommand{\texttrademark}{PD1}{\222}% U+2122
12177 % U+FB01 LATIN SMALL LIGATURE FI; fi
12178 \DeclareTextCommand{\textfi}{PD1}{\223}% U+FB01
12179 % U+FB02 LATIN SMALL LIGATURE FL; fl
12180 \DeclareTextCommand{\textfl}{PD1}{\224}% U+FB02
12181 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
12182 \DeclareTextCommand{\L}{PD1}{\225}% U+0141
12183 % U+0152 LATIN CAPITAL LIGATURE OE; OE
12184 \DeclareTextCommand{\OE}{PD1}{\226}% U+0152
12185 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
12186 \DeclareTextCompositeCommand{\v}{PD1}{S}{\227}% U+0160
12187 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
12188 \DeclareTextCompositeCommand{\"}{PD1}{Y}{\230}% U+0178
12189 \DeclareTextCommand{\IJ}{PD1}{\230}
12190 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
12191 \DeclareTextCompositeCommand{\v}{PD1}{Z}{\231}% U+017D
12192 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
12193 \DeclareTextCommand{\i}{PD1}{\232}% U+0131
12194 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
12195 \DeclareTextCommand{\l}{PD1}{\233}% U+0142
12196 % U+0153 LATIN SMALL LIGATURE OE; oe
12197 \DeclareTextCommand{\oe}{PD1}{\234}% U+0153
12198 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
12199 \DeclareTextCompositeCommand{\v}{PD1}{s}{\235}% U+0161
12200 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
12201 \DeclareTextCompositeCommand{\v}{PD1}{z}{\236}% U+017E

Slot \237 (0x9F) is not defined in PDFDocEncoding.
The euro \240 is inserted in version 1.3 of the pdf specification.
12202 % U+20AC EURO SIGN; *Euro, euro
12203 \DeclareTextCommand{\texteuro}{PD1}{\240}% U+20AC
12204 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
12205 \DeclareTextCommand{\textexclamdown}{PD1}{\241}% U+00A1
12206 % U+00A2 CENT SIGN; cent
12207 \DeclareTextCommand{\textcent}{PD1}{\242}% U+00A2
12208 % U+00A3 POUND SIGN; sterling
12209 \DeclareTextCommand{\textsterling}{PD1}{\243}% U+00A3
12210 % U+00A4 CURRENCY SIGN; currency
12211 \DeclareTextCommand{\textcurrency}{PD1}{\244}% U+00A4
12212 % U+00A5 YEN SIGN; yen
12213 \DeclareTextCommand{\textyen}{PD1}{\245}% U+00A5
12214 % U+00A6 BROKEN BAR; brokenbar
12215 \DeclareTextCommand{\textbrokenbar}{PD1}{\246}% U+00A6
12216 % U+00A7 SECTION SIGN; section
12217 \DeclareTextCommand{\textsection}{PD1}{\247}% U+00A7
12218 % U+00A8 DIAERESIS; dieresis
12219 \DeclareTextCommand{\textasciidieresis}{PD1}{\250}% U+00A8
12220 % U+00A9 COPYRIGHT SIGN; copyright
12221 \DeclareTextCommand{\textcopyright}{PD1}{\251}% U+00A9
12222 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
12223 \DeclareTextCommand{\textordfeminine}{PD1}{\252}% U+00AA
12224 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotleft
12225 \DeclareTextCommand{\guillemotleft}{PD1}{\253}% U+00AB
12226 % U+00AC NOT SIGN; logicalnot
12227 \DeclareTextCommand{\textlogicalnot}{PD1}{\254}% U+00AC
12228 \DeclareTextCommand{\textlnot}{PD1}{\254}% logical not

No glyph \255 in PDFDocEncoding.

12229 % U+00AE REGISTERED SIGN; registered
 12230 \DeclareTextCommand{\textregistered}{PD1}{\256}% U+00AE
 12231 % U+00AF MACRON; *macron, overscore
 12232 \DeclareTextCommand{\textasciimacron}{PD1}{\257}% U+00AF
 12233 % U+00B0 DEGREE SIGN; degree
 12234 \DeclareTextCommand{\textdegree}{PD1}{\260}% U+00B0
 12235 % U+00B1 PLUS-MINUS SIGN; plusminus
 12236 \DeclareTextCommand{\textplusminus}{PD1}{\261}% U+00B1
 12237 % U+00B2 SUPERSCRIP T TWO; twosuperior
 12238 \DeclareTextCommand{\texttwosuperior}{PD1}{\262}% U+00B2
 12239 % U+00B3 SUPERSCRIP T THREE; threesuperior
 12240 \DeclareTextCommand{\textthreesuperior}{PD1}{\263}% U+00B3
 12241 % U+00B4 ACUTE ACCENT; acute
 12242 \DeclareTextCommand{\textacute}{PD1}{\264}% U+00B4
 12243 % U+00B5 MICRO SIGN; mu, mu1
 12244 \DeclareTextCommand{\textmu}{PD1}{\265}% U+00B5
 12245 % U+00B6 PILCROW SIGN; paragraph
 12246 \DeclareTextCommand{\textparagraph}{PD1}{\266}% U+00B6
 12247 % U+00B7 MIDDLE DOT; middot, *periodcentered
 12248 \DeclareTextCommand{\textperiodcentered}{PD1}{\267}% U+00B7
 12249 % U+00B8 CEDILLA; cedilla
 12250 \DeclareTextCommand{\textcedilla}{PD1}{\270}% U+00B8
 12251 % U+00B9 SUPERSCRIP T ONE; onesuperior
 12252 \DeclareTextCommand{\textonesuperior}{PD1}{\271}% U+00B9
 12253 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
 12254 \DeclareTextCommand{\textordmasculine}{PD1}{\272}% U+00BA
 12255 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotright
 12256 \DeclareTextCommand{\guillemotright}{PD1}{\273}% U+00BB
 12257 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
 12258 \DeclareTextCommand{\textonequarter}{PD1}{\274}% U+00BC
 12259 % U+00BD VULGAR FRACTION ONE HALF; onehalf
 12260 \DeclareTextCommand{\textonehalf}{PD1}{\275}% U+00BD
 12261 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
 12262 \DeclareTextCommand{\textthreequarters}{PD1}{\276}% U+00BE
 12263 % U+00BF INVERTED QUESTION MARK; questiondown
 12264 \DeclareTextCommand{\textquestiondown}{PD1}{\277}% U+00BF
 12265 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
 12266 \DeclareTextCompositeCommand{\`}{PD1}{A}{\300}% U+00C0
 12267 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
 12268 \DeclareTextCompositeCommand{\'}{PD1}{A}{\301}% U+00C1
 12269 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
 12270 \DeclareTextCompositeCommand{\^}{PD1}{A}{\302}% U+00C2
 12271 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
 12272 \DeclareTextCompositeCommand{\~}{PD1}{A}{\303}% U+00C3
 12273 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
 12274 \DeclareTextCompositeCommand{\"}{PD1}{A}{\304}% U+00C4
 12275 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
 12276 \DeclareTextCompositeCommand{\r}{PD1}{A}{\305}% U+00C5
 12277 % U+00C6 LATIN CAPITAL LETTER AE; AE
 12278 \DeclareTextCommand{\AE}{PD1}{\306}% U+00C6
 12279 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
 12280 \DeclareTextCompositeCommand{\c}{PD1}{C}{\307}% U+00C7
 12281 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
 12282 \DeclareTextCompositeCommand{\`}{PD1}{E}{\310}% U+00C8
 12283 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
 12284 \DeclareTextCompositeCommand{\'}{PD1}{E}{\311}% U+00C9
 12285 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex

12286 \DeclareTextCompositeCommand{\`}{PD1}{E}{\312}% U+00CA
12287 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
12288 \DeclareTextCompositeCommand{\"}{PD1}{E}{\313}% U+00CB
12289 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
12290 \DeclareTextCompositeCommand{\'}{PD1}{I}{\314}% U+00CC
12291 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
12292 \DeclareTextCompositeCommand{\'}{PD1}{I}{\315}% U+00CD
12293 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
12294 \DeclareTextCompositeCommand{\^}{PD1}{I}{\316}% U+00CE
12295 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
12296 \DeclareTextCompositeCommand{\"}{PD1}{I}{\317}% U+00CF
12297 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
12298 \DeclareTextCommand{\DH}{PD1}{\320}% U+00D0
12299 \DeclareTextCommand{\DJ}{PD1}{\320}% U+00D0
12300 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
12301 \DeclareTextCompositeCommand{\~}{PD1}{N}{\321}% U+00D1
12302 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
12303 \DeclareTextCompositeCommand{\'}{PD1}{O}{\322}% U+00D2
12304 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
12305 \DeclareTextCompositeCommand{\'}{PD1}{O}{\323}% U+00D3
12306 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
12307 \DeclareTextCompositeCommand{\^}{PD1}{O}{\324}% U+00D4
12308 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
12309 \DeclareTextCompositeCommand{\~}{PD1}{O}{\325}% U+00D5
12310 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
12311 \DeclareTextCompositeCommand{\"}{PD1}{O}{\326}% U+00D6
12312 % U+00D7 MULTIPLICATION SIGN; multiply
12313 \DeclareTextCommand{\textmultiply}{PD1}{\327}% U+00D7
12314 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
12315 \DeclareTextCommand{\O}{PD1}{\330}% U+00D8
12316 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
12317 \DeclareTextCompositeCommand{\'}{PD1}{U}{\331}% U+00D9
12318 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
12319 \DeclareTextCompositeCommand{\'}{PD1}{U}{\332}% U+00DA
12320 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
12321 \DeclareTextCompositeCommand{\^}{PD1}{U}{\333}% U+00DB
12322 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
12323 \DeclareTextCompositeCommand{\"}{PD1}{U}{\334}% U+00DC
12324 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
12325 \DeclareTextCompositeCommand{\'}{PD1}{Y}{\335}% U+00DD
12326 % U+00DE LATIN CAPITAL LETTER THORN; Thorn
12327 \DeclareTextCommand{\TH}{PD1}{\336}% U+00DE
12328 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
12329 \DeclareTextCommand{\ss}{PD1}{\337}% U+00DF
12330 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
12331 \DeclareTextCompositeCommand{\'}{PD1}{a}{\340}% U+00E0
12332 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
12333 \DeclareTextCompositeCommand{\'}{PD1}{a}{\341}% U+00E1
12334 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
12335 \DeclareTextCompositeCommand{\^}{PD1}{a}{\342}% U+00E2
12336 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
12337 \DeclareTextCompositeCommand{\~}{PD1}{a}{\343}% U+00E3
12338 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
12339 \DeclareTextCompositeCommand{\"}{PD1}{a}{\344}% U+00E4
12340 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
12341 \DeclareTextCompositeCommand{\r}{PD1}{a}{\345}% U+00E5
12342 % U+00E6 LATIN SMALL LETTER AE; ae

12343 \DeclareTextCommand{\ae}{PD1}{\346}% U+00E6
12344 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
12345 \DeclareTextCompositeCommand{\c}{PD1}{c}{\347}% U+00E7
12346 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
12347 \DeclareTextCompositeCommand{\`}{PD1}{e}{\350}% U+00E8
12348 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
12349 \DeclareTextCompositeCommand{\'}{PD1}{e}{\351}% U+00E9
12350 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
12351 \DeclareTextCompositeCommand{\^}{PD1}{e}{\352}% U+00EA
12352 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
12353 \DeclareTextCompositeCommand{\"}{PD1}{e}{\353}% U+00EB
12354 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
12355 \DeclareTextCompositeCommand{\`}{PD1}{i}{\354}% U+00EC
12356 \DeclareTextCompositeCommand{\'}{PD1}{i}{\354}% U+00EC
12357 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
12358 \DeclareTextCompositeCommand{\`}{PD1}{i}{\355}% U+00ED
12359 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
12360 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
12361 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
12362 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
12363 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
12364 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
12365 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
12366 % U+00F0 LATIN SMALL LETTER ETH; eth
12367 \DeclareTextCommand{\dh}{PD1}{\360}% U+00F0
12368 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
12369 \DeclareTextCompositeCommand{\~}{PD1}{n}{\361}% U+00F1
12370 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
12371 \DeclareTextCompositeCommand{\`}{PD1}{o}{\362}% U+00F2
12372 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
12373 \DeclareTextCompositeCommand{\'}{PD1}{o}{\363}% U+00F3
12374 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
12375 \DeclareTextCompositeCommand{\^}{PD1}{o}{\364}% U+00F4
12376 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
12377 \DeclareTextCompositeCommand{\~}{PD1}{o}{\365}% U+00F5
12378 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
12379 \DeclareTextCompositeCommand{\"}{PD1}{o}{\366}% U+00F6
12380 % U+00F7 DIVISION SIGN; divide
12381 \DeclareTextCommand{\textdivide}{PD1}{\367}% U+00F7
12382 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
12383 \DeclareTextCommand{\o}{PD1}{\370}% U+00F8
12384 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
12385 \DeclareTextCompositeCommand{\`}{PD1}{u}{\371}% U+00F9
12386 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
12387 \DeclareTextCompositeCommand{\'}{PD1}{u}{\372}% U+00FA
12388 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
12389 \DeclareTextCompositeCommand{\^}{PD1}{u}{\373}% U+00FB
12390 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
12391 \DeclareTextCompositeCommand{\"}{PD1}{u}{\374}% U+00FC
12392 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
12393 \DeclareTextCompositeCommand{\'}{PD1}{y}{\375}% U+00FD
12394 % U+00FE LATIN SMALL LETTER THORN; thorn
12395 \DeclareTextCommand{\th}{PD1}{\376}% U+00FE
12396 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
12397 \DeclareTextCompositeCommand{\"}{PD1}{y}{\377}% U+00FF
12398 \DeclareTextCommand{\ij}{PD1}{\377}% U+00FF

Glyphs that consist of several characters.

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12399 \DeclareTextCommand{\SS}{PD1}{SS}
12400 \DeclareTextCommand{\textcelsius}{PD1}{\textdegree C}

Aliases (german.sty)
12401 \DeclareTextCommand{\textglqq}{PD1}{\quotedblbase}
12402 \DeclareTextCommand{\textgrqq}{PD1}{\textquotedblleft}
12403 \DeclareTextCommand{\textglq}{PD1}{\quotesinglbase}
12404 \DeclareTextCommand{\textgrq}{PD1}{\textquoteleft}
12405 \DeclareTextCommand{\textflqq}{PD1}{\guillemotleft}
12406 \DeclareTextCommand{\textfrqq}{PD1}{\guillemotright}
12407 \DeclareTextCommand{\textflq}{PD1}{\guilsinglleft}
12408 \DeclareTextCommand{\textfrq}{PD1}{\guilsinglright}

Aliases (math names)
12409 \DeclareTextCommand{\textneg}{PD1}{\textlogicalnot}
12410 \DeclareTextCommand{\texttimes}{PD1}{\textmultiply}
12411 \DeclareTextCommand{\textdiv}{PD1}{\textdivide}
12412 \DeclareTextCommand{\textpm}{PD1}{\textplusminus}
12413 \DeclareTextCommand{\textcdot}{PD1}{\textperiodcentered}
12414 \DeclareTextCommand{\textbeta}{PD1}{\ss}

Polish aliases. PDF encoding does not have the characters, but it is useful to Poles to have
the plain letters regardless. Requested by Wojciech Myszka ;W.Myszka@immt.pwr.wroc.pl;
12415 \DeclareTextCompositeCommand{\k}{PD1}{a}{a}% aogonek
12416 \DeclareTextCompositeCommand{\'}{PD1}{c}{c}% cacute
12417 \DeclareTextCompositeCommand{\k}{PD1}{e}{e}% eogonek
12418 \DeclareTextCompositeCommand{\'}{PD1}{n}{n}% nacute
12419 \DeclareTextCompositeCommand{\'}{PD1}{s}{s}% sacute
12420 \DeclareTextCompositeCommand{\'}{PD1}{z}{z}% zacute
12421 \DeclareTextCompositeCommand{\.}{PD1}{z}{z}% zdot

12422 \DeclareTextCompositeCommand{\k}{PD1}{A}{A}% Aogonek
12423 \DeclareTextCompositeCommand{\'}{PD1}{C}{C}% Cacute
12424 \DeclareTextCompositeCommand{\k}{PD1}{E}{E}% Eogonek
12425 \DeclareTextCompositeCommand{\'}{PD1}{N}{N}% Nacute
12426 \DeclareTextCompositeCommand{\'}{PD1}{S}{S}% Sacute
12427 \DeclareTextCompositeCommand{\'}{PD1}{Z}{Z}% Zacute
12428 \DeclareTextCompositeCommand{\.}{PD1}{Z}{Z}% Zdot

12429 </pd1enc>

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50.2 PU encoding

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12430 <*puenc>
12431 \DeclareFontEncoding{PU}{}{}

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50.2.1 NFSS2 accents

```

12432 % U+0300 COMBINING GRAVE ACCENT; gravecmb, *gravecomb
12433 \DeclareTextCommand{\'}{PU}[1]{\#1\83\000}% U+0300
12434 % U+0301 COMBINING ACUTE ACCENT; acutecmb, *acutecomb
12435 \DeclareTextCommand{\'}{PU}[1]{\#1\83\001}% U+0301
12436 % U+0302 COMBINING CIRCUMFLEX ACCENT; circumflexcmb
12437 \DeclareTextCommand{\^}{PU}[1]{\#1\83\002}% U+0302
12438 % U+0303 COMBINING TILDE; tildecmb, *tildecomb
12439 \DeclareTextCommand{\~}{PU}[1]{\#1\83\003}% U+0303
12440 % U+0304 COMBINING MACRON; macroncmb
12441 \DeclareTextCommand{\=}{PU}[1]{\#1\83\004}% U+0304
12442 % U+0306 COMBINING BREVE; brevecmb
12443 \DeclareTextCommand{\u}{PU}[1]{\#1\83\006}% U+0306
12444 \DeclareTextCommand{\U}{PU}[1]{\#1\83\006}% U+0306
12445 % U+0307 COMBINING DOT ABOVE; dotaccentcmb

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12446 \DeclareTextCommand{\.}{PU}[1]{#1\83\007}% U+0307
12447 % U+0308 COMBINING DIAERESIS; dieresiscmb
12448 \DeclareTextCommand{\"}{PU}[1]{#1\83\010}% U+0308
12449 % U+030A COMBINING RING ABOVE; ringcmb
12450 \DeclareTextCommand{\r}{PU}[1]{#1\83\012}% U+030A
12451 % U+030B COMBINING DOUBLE ACUTE ACCENT; hungarumlautcmb
12452 \DeclareTextCommand{\H}{PU}[1]{#1\83\013}% U+030B
12453 % U+030C COMBINING CARON; caroncmb
12454 \DeclareTextCommand{\v}{PU}[1]{#1\83\014}% U+030C
12455 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravescmb
12456 \DeclareTextCommand{\G}{PU}[1]{#1\83\017}% U+030F
12457 \DeclareTextCommand{\C}{PU}[1]{#1\83\017}% U+030F
12458 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
12459 \DeclareTextCommand{\newtie}{PU}[1]{#1\83\021}% U+0311
12460 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcmb
12461 \DeclareTextCommand{\d}{PU}[1]{#1\83\043}% U+0323
12462 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
12463 \DeclareTextCommand{\b}{PU}[1]{#1\83\061}% U+0331
12464 % U+0327 COMBINING CEDILLA; cedillacmb
12465 \DeclareTextCommand{\c}{PU}[1]{#1\83\047}% U+0327
12466 % U+0328 COMBINING OGONEK; ogonekcmb
12467 \DeclareTextCommand{\k}{PU}[1]{#1\83\050}% U+0328
12468 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
12469 \DeclareTextCommand{\t}{PU}[1]{#1\83\141}% U+0361
12470 % U+20DD COMBINING ENCLOSING CIRCLE
12471 \DeclareTextCommand{\textcircled}{PU}[1]{#1\9040\335}% U+20DD

```

\@empty is an artefact of the NFSS2 machinery, it gets inserted for empty arguments and spaces.

```

12472 \DeclareTextCompositeCommand{\`}{PU}{\@empty}{\textasciigrave}
12473 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textacute}
12474 \DeclareTextCompositeCommand{\^}{PU}{\@empty}{\textasciicircum}
12475 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\texttilde}
12476 \DeclareTextCompositeCommand{\"}{PU}{\@empty}{\textasciidieresis}
12477 \DeclareTextCompositeCommand{\r}{PU}{\@empty}{\textring}
12478 \DeclareTextCompositeCommand{\v}{PU}{\@empty}{\textasciicaron}
12479 \DeclareTextCompositeCommand{\.}{PU}{\@empty}{\textdotaccent}
12480 \DeclareTextCompositeCommand{\c}{PU}{\@empty}{\textcedilla}
12481 \DeclareTextCompositeCommand{\u}{PU}{\@empty}{\textasciibreve}
12482 \DeclareTextCompositeCommand{\G}{PU}{\@empty}{\textdoublegrave}
12483 \DeclareTextCompositeCommand{\=}{PU}{\@empty}{\textasciimacron}
12484 \DeclareTextCompositeCommand{\H}{PU}{\@empty}{\texthungarumlaut}
12485 \DeclareTextCompositeCommand{\k}{PU}{\@empty}{\textogonek}
12486 \DeclareTextCompositeCommand{\b}{PU}{\@empty}{\textmacronbelow}
12487 \DeclareTextCompositeCommand{\d}{PU}{\@empty}{\textdotbelow}
12488 \DeclareTextCompositeCommand{\t}{PU}{\@empty}{\texttie}
12489 \DeclareTextCompositeCommand{\newtie}{PU}{\@empty}{\textnewtie}
12490 \DeclareTextCompositeCommand{\textcircled}{PU}{\@empty}{\textbigcircle}
12491 \DeclareTextCompositeCommand{\`}{PU}{\ }{\textasciigrave}
12492 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textacute}
12493 \DeclareTextCompositeCommand{\^}{PU}{\ }{\textasciicircum}
12494 \DeclareTextCompositeCommand{\~}{PU}{\ }{\texttilde}
12495 \DeclareTextCompositeCommand{\"}{PU}{\ }{\textasciidieresis}
12496 \DeclareTextCompositeCommand{\r}{PU}{\ }{\textring}
12497 \DeclareTextCompositeCommand{\v}{PU}{\ }{\textasciicaron}
12498 \DeclareTextCompositeCommand{\.}{PU}{\ }{\textdotaccent}
12499 \DeclareTextCompositeCommand{\c}{PU}{\ }{\textcedilla}
12500 \DeclareTextCompositeCommand{\u}{PU}{\ }{\textasciibreve}

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12501 \DeclareTextCompositeCommand{\G}{PU}{\ }{\textdoublegrave}
12502 \DeclareTextCompositeCommand{\=}{PU}{\ }{\textasciimacron}
12503 \DeclareTextCompositeCommand{\H}{PU}{\ }{\texthungarumlaut}
12504 \DeclareTextCompositeCommand{\k}{PU}{\ }{\textogonek}
12505 \DeclareTextCompositeCommand{\b}{PU}{\ }{\textmacronbelow}
12506 \DeclareTextCompositeCommand{\d}{PU}{\ }{\textdotbelow}
12507 \DeclareTextCompositeCommand{\t}{PU}{\ }{\texttie}
12508 \DeclareTextCompositeCommand{\newtie}{PU}{\ }{\textnewtie}
12509 \DeclareTextCompositeCommand{\textcircled}{PU}{\ }{\textbigcircle}

```

Accents for capitals (see encoding TS1)

```

12510 \DeclareTextCommand{\capitalcedilla}{PU}[1]{\c{#1}}
12511 \DeclareTextCommand{\capitalogonek}{PU}[1]{\k{#1}}
12512 \DeclareTextCommand{\capitalgrave}{PU}[1]{\`{#1}}
12513 \DeclareTextCommand{\capitalacute}{PU}[1]{\'{#1}}
12514 \DeclareTextCommand{\capitalcircumflex}{PU}[1]{\^{#1}}
12515 \DeclareTextCommand{\capitaltilde}{PU}[1]{\~{#1}}
12516 \DeclareTextCommand{\capitaldieresis}{PU}[1]{\#{#1}}
12517 \DeclareTextCommand{\capitalhungarumlaut}{PU}[1]{\H{#1}}
12518 \DeclareTextCommand{\capitalring}{PU}[1]{\r{#1}}
12519 \DeclareTextCommand{\capitalcaron}{PU}[1]{\v{#1}}
12520 \DeclareTextCommand{\capitalbreve}{PU}[1]{\u{#1}}
12521 \DeclareTextCommand{\capitalmacron}{PU}[1]{\={#1}}
12522 \DeclareTextCommand{\capitaldotaccent}{PU}[1]{\.{#1}}
12523 \DeclareTextCommand{\capitaltie}{PU}[1]{\t{#1}}
12524 \DeclareTextCommand{\capitalnewtie}{PU}[1]{\newtie{#1}}

```

50.2.2 Basic Latin: U+0000 to U+007F

Special white space escape characters.

```

12525 % U+0009 (CHARACTER TABULATION)
12526 \DeclareTextCommand{\textHT}{PU}{\80\011}% U+0009
12527 % U+000A (LINE FEED)
12528 \DeclareTextCommand{\textLF}{PU}{\80\012}% U+000A
12529 % U+000D (CARRIAGE RETURN)
12530 \DeclareTextCommand{\textCR}{PU}{\80\015}% U+000D

\80\040: U+0020 SPACE; space, spacehackarabic
\80\041: U+0021 EXCLAMATION MARK; exclam

12531 % U+0022 QUOTATION MARK; quotedbl
12532 \DeclareTextCommand{\textquotedbl}{PU}{\string"}% \80\042 U+0022
12533 % U+0023 NUMBER SIGN; numbersign
12534 \DeclareTextCommand{\textnumbersign}{PU}{\80\043}% U+0023
12535 % U+0024 DOLLAR SIGN; dollar
12536 \DeclareTextCommand{\textdollar}{PU}{\80\044}% U+0024
12537 % U+0025 PERCENT SIGN; percent
12538 \DeclareTextCommand{\textpercent}{PU}{\80\045}% U+0025
12539 % U+0026 AMPERSAND; ampersand
12540 \DeclareTextCommand{\textampersand}{PU}{\80\046}% U+0026
12541 % U+0027 APOSTROPHE; quotesingle
12542 \DeclareTextCommand{\textquotesingle}{PU}{\80\047}% U+0027
12543 % U+0028 LEFT PARENTHESIS; parenleft
12544 \DeclareTextCommand{\textparenleft}{PU}{\80\050}% U+0028
12545 % U+0029 RIGHT PARENTHESIS; parenright
12546 \DeclareTextCommand{\textparenright}{PU}{\80\051}% U+0029
12547 % U+002A ASTERISK; asterisk
12548 \DeclareTextCommand{\textasteriskcentered}{PU}{\80\052}% U+002A (?)

\80\053: U+002B PLUS SIGN; plus
\80\054: U+002C COMMA; comma

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\80\055: U+002D HYPHEN-MINUS; hyphen
 \80\056: U+002E FULL STOP; period
 \80\057: U+002F SOLIDUS; slash
 \80\060: U+0030 DIGIT ZERO; zero
 ...
 \80\071: U+0039 DIGIT NINE; nine
 \80\072: U+003A COLON; colon
 \80\073: U+003B SEMICOLON; semicolon
 12549 % U+003C LESS-THAN SIGN; less
 12550 \DeclareTextCommand{\textless}{PU}{<}% \80\074 U+003C
 \80\075: U+003D EQUALS SIGN; equal
 12551 % U+003E GREATER-THAN SIGN; greater
 12552 \DeclareTextCommand{\textgreater}{PU}{>}% \80\076 U+003E
 \80\077: U+003F QUESTION MARK; question
 \80\100: U+0040 COMMERCIAL AT; at
 \80\101: U+0041 LATIN CAPITAL LETTER A; A
 ...
 \80\132: U+005A LATIN CAPITAL LETTER Z; Z
 \80\133: U+005B LEFT SQUARE BRACKET; bracketleft
 12553 % U+005C REVERSE SOLIDUS; backslash
 12554 \DeclareTextCommand{\textbackslash}{PU}{\80\134}% U+005C
 \80\135: U+005D RIGHT SQUARE BRACKET; bracketright
 12555 % U+005E CIRCUMFLEX ACCENT; asciicircum
 12556 \DeclareTextCommand{\textasciicircum}{PU}{\80\136}% U+005E
 12557 % U+005F LOW LINE; underscore
 12558 \DeclareTextCommand{\textunderscore}{PU}{\80\137}% U+005F
 12559 % U+0060 GRAVE ACCENT; grave
 12560 \DeclareTextCommand{\textasciigrave}{PU}{\80\140}% U+0060
 \80\141: U+0061 LATIN SMALL LETTER A; a
 ...
 \80\150: U+0068 LATIN SMALL LETTER H; h
 12561 % U+0069 LATIN SMALL LETTER I; i
 12562 \DeclareTextCompositeCommand{\.}{PU}{i}{i} % \80\151 U+0069
 12563 \DeclareTextCompositeCommand{\.}{PU}{i}{i}% \80\151 U+0069
 \80\152: U+006A LATIN SMALL LETTER J; j
 ...
 \80\172: U+007A LATIN SMALL LETTER Z; z
 12564 % U+007B LEFT CURLY BRACKET; braceleft
 12565 \DeclareTextCommand{\textbraceleft}{PU}{\80\173}% U+007B
 12566 % U+007C VERTICAL LINE; *bar, verticalbar
 12567 \DeclareTextCommand{\textbar}{PU}{|}% \80\174 U+007C
 12568 % U+007D RIGHT CURLY BRACKET; braceright
 12569 \DeclareTextCommand{\textbraceright}{PU}{\80\175}% U+007D
 12570 % U+007E TILDE; asciitilde
 12571 \DeclareTextCommand{\textasciitilde}{PU}{\80\176}% U+007E

50.2.3 Latin-1 Supplement: U+0080 to U+00FF

\80\240: U+00A0 NO-BREAK SPACE; nbspace, nonbreakingspace
 12572 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 12573 \DeclareTextCommand{\textexclamdown}{PU}{\80\241}% U+00A1
 12574 % U+00A2 CENT SIGN; cent

12575 \DeclareTextCommand{\textcent}{PU}{\80\242}% U+00A2
 12576 % U+00A3 POUND SIGN; sterling
 12577 \DeclareTextCommand{\textsterling}{PU}{\80\243}% U+00A3
 12578 % U+00A4 CURRENCY SIGN; currency
 12579 \DeclareTextCommand{\textcurrency}{PU}{\80\244}% U+00A4
 12580 % U+00A5 YEN SIGN; yen
 12581 \DeclareTextCommand{\textyen}{PU}{\80\245}% U+00A5
 12582 % U+00A6 BROKEN BAR; brokenbar
 12583 \DeclareTextCommand{\textbrokenbar}{PU}{\80\246}% U+00A6
 12584 % U+00A7 SECTION SIGN; section
 12585 \DeclareTextCommand{\textsection}{PU}{\80\247}% U+00A7
 12586 % U+00A8 DIAERESIS; dieresis
 12587 \DeclareTextCommand{\textasciidieresis}{PU}{\80\250}% U+00A8
 12588 % U+00A9 COPYRIGHT SIGN; copyright
 12589 \DeclareTextCommand{\textcopyright}{PU}{\80\251}% U+00A9
 12590 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 12591 \DeclareTextCommand{\textordfeminine}{PU}{\80\252}% U+00AA
 12592 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotleft
 12593 \DeclareTextCommand{\guillemotleft}{PU}{\80\253}% U+00AB
 12594 % U+00AC NOT SIGN; logicalnot
 12595 \DeclareTextCommand{\textlogicalnot}{PU}{\80\254}% U+00AC
 12596 \DeclareTextCommand{\textlnot}{PU}{\80\254}% U+00AC
 \80\255: U+00AD SOFT HYPHEN; sfthyphen, softthyphen
 12597 % U+00AE REGISTERED SIGN; registered
 12598 \DeclareTextCommand{\textregistered}{PU}{\80\256}% U+00AE
 12599 % U+00AF MACRON; *macron, overscore
 12600 \DeclareTextCommand{\textasciimacron}{PU}{\80\257}% U+00AF
 12601 % U+00B0 DEGREE SIGN; degree
 12602 \DeclareTextCommand{\textdegree}{PU}{\80\260}% U+00B0
 12603 % U+00B1 PLUS-MINUS SIGN; plusminus
 12604 \DeclareTextCommand{\textplusminus}{PU}{\80\261}% U+00B1
 12605 % U+00B2 SUPERSCRIPT TWO; twosuperior
 12606 \DeclareTextCommand{\texttwosuperior}{PU}{\80\262}% U+00B2
 12607 % U+00B3 SUPERSCRIPT THREE; threesuperior
 12608 \DeclareTextCommand{\textthreesuperior}{PU}{\80\263}% U+00B3
 12609 % U+00B4 ACUTE ACCENT; acute
 12610 \DeclareTextCommand{\textacute}{PU}{\80\264}% U+00B4
 12611 \DeclareTextCommand{\textasciiacute}{PU}{\80\264}% U+00B4
 12612 % U+00B5 MICRO SIGN; mu, mu1
 12613 \DeclareTextCommand{\textmu}{PU}{\80\265}% U+00B5
 12614 % U+00B6 PILCROW SIGN; paragraph
 12615 \DeclareTextCommand{\textparagraph}{PU}{\80\266}% U+00B6
 12616 % U+00B7 MIDDLE DOT; middot, *periodcentered
 12617 \DeclareTextCommand{\textperiodcentered}{PU}{\80\267}% U+00B7
 12618 % U+00B8 CEDILLA; cedilla
 12619 \DeclareTextCommand{\textcedilla}{PU}{\80\270}% U+00B8
 12620 % U+00B9 SUPERSCRIPT ONE; onesuperior
 12621 \DeclareTextCommand{\textonesuperior}{PU}{\80\271}% U+00B9
 12622 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
 12623 \DeclareTextCommand{\textordmasculine}{PU}{\80\272}% U+00BA
 12624 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotright
 12625 \DeclareTextCommand{\guillemotright}{PU}{\80\273}% U+00BB
 12626 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
 12627 \DeclareTextCommand{\textonequarter}{PU}{\80\274}% U+00BC
 12628 % U+00BD VULGAR FRACTION ONE HALF; onehalf
 12629 \DeclareTextCommand{\textonehalf}{PU}{\80\275}% U+00BD
 12630 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters

12631 \DeclareTextCommand{\textthreequarters}{PU}{\80\276}% U+00BE
12632 % U+00BF INVERTED QUESTION MARK; questiondown
12633 \DeclareTextCommand{\textquestiondown}{PU}{\80\277}% U+00BF
12634 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
12635 \DeclareTextCompositeCommand{`}{PU}{A}{\80\300}% U+00C0
12636 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
12637 \DeclareTextCompositeCommand{'}{PU}{A}{\80\301}% U+00C1
12638 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
12639 \DeclareTextCompositeCommand{^}{PU}{A}{\80\302}% U+00C2
12640 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
12641 \DeclareTextCompositeCommand{~}{PU}{A}{\80\303}% U+00C3
12642 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
12643 \DeclareTextCompositeCommand{"}{PU}{A}{\80\304}% U+00C4
12644 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
12645 \DeclareTextCompositeCommand{r}{PU}{A}{\80\305}% U+00C5
12646 % U+00C6 LATIN CAPITAL LETTER AE; AE
12647 \DeclareTextCommand{\AE}{PU}{\80\306}% U+00C6
12648 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
12649 \DeclareTextCompositeCommand{c}{PU}{C}{\80\307}% U+00C7
12650 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
12651 \DeclareTextCompositeCommand{`}{PU}{E}{\80\310}% U+00C8
12652 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
12653 \DeclareTextCompositeCommand{'}{PU}{E}{\80\311}% U+00C9
12654 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
12655 \DeclareTextCompositeCommand{^}{PU}{E}{\80\312}% U+00CA
12656 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
12657 \DeclareTextCompositeCommand{"}{PU}{E}{\80\313}% U+00CB
12658 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
12659 \DeclareTextCompositeCommand{`}{PU}{I}{\80\314}% U+00CC
12660 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
12661 \DeclareTextCompositeCommand{'}{PU}{I}{\80\315}% U+00CD
12662 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
12663 \DeclareTextCompositeCommand{^}{PU}{I}{\80\316}% U+00CE
12664 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
12665 \DeclareTextCompositeCommand{"}{PU}{I}{\80\317}% U+00CF
12666 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
12667 \DeclareTextCommand{\DH}{PU}{\80\320}% U+00D0
12668 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
12669 \DeclareTextCompositeCommand{~}{PU}{N}{\80\321}% U+00D1
12670 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
12671 \DeclareTextCompositeCommand{`}{PU}{O}{\80\322}% U+00D2
12672 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
12673 \DeclareTextCompositeCommand{'}{PU}{O}{\80\323}% U+00D3
12674 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
12675 \DeclareTextCompositeCommand{^}{PU}{O}{\80\324}% U+00D4
12676 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
12677 \DeclareTextCompositeCommand{~}{PU}{O}{\80\325}% U+00D5
12678 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
12679 \DeclareTextCompositeCommand{"}{PU}{O}{\80\326}% U+00D6
12680 % U+00D7 MULTIPLICATION SIGN; multiply
12681 \DeclareTextCommand{\textmultiply}{PU}{\80\327}% U+00D7
12682 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
12683 \DeclareTextCommand{\O}{PU}{\80\330}% U+00D8
12684 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
12685 \DeclareTextCompositeCommand{`}{PU}{U}{\80\331}% U+00D9
12686 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
12687 \DeclareTextCompositeCommand{'}{PU}{U}{\80\332}% U+00DA

12688 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
12689 \DeclareTextCompositeCommand{\^}{PU}{U}{\80\333}% U+00DB
12690 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
12691 \DeclareTextCompositeCommand{\"}{PU}{U}{\80\334}% U+00DC
12692 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
12693 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
12694 % U+00DE LATIN CAPITAL LETTER THORN; Thorn
12695 \DeclareTextCommand{\TH}{PU}{\80\336}% U+00DE
12696 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
12697 \DeclareTextCommand{\ss}{PU}{\80\337}% U+00DF
12698 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
12699 \DeclareTextCompositeCommand{\`}{PU}{a}{\80\340}% U+00E0
12700 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
12701 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
12702 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
12703 \DeclareTextCompositeCommand{\^}{PU}{a}{\80\342}% U+00E2
12704 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
12705 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
12706 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
12707 \DeclareTextCompositeCommand{\"}{PU}{a}{\80\344}% U+00E4
12708 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
12709 \DeclareTextCompositeCommand{\r}{PU}{a}{\80\345}% U+00E5
12710 % U+00E6 LATIN SMALL LETTER AE; ae
12711 \DeclareTextCommand{\ae}{PU}{\80\346}% U+00E6
12712 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
12713 \DeclareTextCompositeCommand{\c}{PU}{c}{\80\347}% U+00E7
12714 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
12715 \DeclareTextCompositeCommand{\`}{PU}{e}{\80\350}% U+00E8
12716 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
12717 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
12718 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
12719 \DeclareTextCompositeCommand{\^}{PU}{e}{\80\352}% U+00EA
12720 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
12721 \DeclareTextCompositeCommand{\"}{PU}{e}{\80\353}% U+00EB
12722 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
12723 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
12724 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}% U+00EC
12725 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
12726 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
12727 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
12728 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
12729 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
12730 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
12731 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
12732 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
12733 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
12734 % U+00F0 LATIN SMALL LETTER ETH; eth
12735 \DeclareTextCommand{\dh}{PU}{\80\360}% U+00F0
12736 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
12737 \DeclareTextCompositeCommand{\~}{PU}{n}{\80\361}% U+00F1
12738 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
12739 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\362}% U+00F2
12740 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
12741 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
12742 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
12743 \DeclareTextCompositeCommand{\^}{PU}{o}{\80\364}% U+00F4
12744 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde

12745 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
 12746 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
 12747 \DeclareTextCompositeCommand{\"}{PU}{o}{\80\366}% U+00F6
 12748 % U+00F7 DIVISION SIGN; divide
 12749 \DeclareTextCommand{\textdivide}{PU}{\80\367}% U+00F7
 12750 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
 12751 \DeclareTextCommand{\o}{PU}{\80\370}% U+00F8
 12752 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
 12753 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\371}% U+00F9
 12754 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
 12755 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
 12756 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
 12757 \DeclareTextCompositeCommand{\^}{PU}{u}{\80\373}% U+00FB
 12758 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
 12759 \DeclareTextCompositeCommand{\"}{PU}{u}{\80\374}% U+00FC
 12760 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
 12761 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD
 12762 % U+00FE LATIN SMALL LETTER THORN; thorn
 12763 \DeclareTextCommand{\th}{PU}{\80\376}% U+00FE
 12764 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
 12765 \DeclareTextCompositeCommand{\"}{PU}{y}{\80\377}% U+00FF

50.2.4 Latin Extended-A: U+0080 to U+017F

12766 % U+0100 LATIN CAPITAL LETTER A WITH MACRON; Amacron
 12767 \DeclareTextCompositeCommand{\=}{PU}{A}{\81\000}% U+0100
 12768 % U+0101 LATIN SMALL LETTER A WITH MACRON; amacron
 12769 \DeclareTextCompositeCommand{\=}{PU}{a}{\81\001}% U+0101
 12770 % U+0102 LATIN CAPITAL LETTER A WITH BREVE; Abreve
 12771 \DeclareTextCompositeCommand{\u}{PU}{A}{\81\002}% U+0102
 12772 % U+0103 LATIN SMALL LETTER A WITH BREVE; abreve
 12773 \DeclareTextCompositeCommand{\u}{PU}{a}{\81\003}% U+0103
 12774 % U+0104 LATIN CAPITAL LETTER A WITH OGONEK; Aogonek
 12775 \DeclareTextCompositeCommand{\k}{PU}{A}{\81\004}% U+0104
 12776 % U+0105 LATIN SMALL LETTER A WITH OGONEK; aogonek
 12777 \DeclareTextCompositeCommand{\k}{PU}{a}{\81\005}% U+0105
 12778 % U+0106 LATIN CAPITAL LETTER C WITH ACUTE; Cacute
 12779 \DeclareTextCompositeCommand{\'}{PU}{C}{\81\006}% U+0106
 12780 % U+0107 LATIN SMALL LETTER C WITH ACUTE; cacute
 12781 \DeclareTextCompositeCommand{\'}{PU}{c}{\81\007}% U+0107
 12782 % U+0108 LATIN CAPITAL LETTER C WITH CIRCUMFLEX; Ccircumflex
 12783 \DeclareTextCompositeCommand{\^}{PU}{C}{\81\010}% U+0108
 12784 % U+0109 LATIN SMALL LETTER C WITH CIRCUMFLEX; ccircumflex
 12785 \DeclareTextCompositeCommand{\^}{PU}{c}{\81\011}% U+0109
 12786 % U+010A LATIN CAPITAL LETTER C WITH DOT ABOVE; Cdot, Cdotaccent
 12787 \DeclareTextCompositeCommand{\.}{PU}{C}{\81\012}% U+010A
 12788 % U+010B LATIN SMALL LETTER C WITH DOT ABOVE; cdot, cdotaccent
 12789 \DeclareTextCompositeCommand{\.}{PU}{c}{\81\013}% U+010B
 12790 % U+010C LATIN CAPITAL LETTER C WITH CARON; Ccaron
 12791 \DeclareTextCompositeCommand{\v}{PU}{C}{\81\014}% U+010C
 12792 % U+010D LATIN SMALL LETTER C WITH CARON; ccaron
 12793 \DeclareTextCompositeCommand{\v}{PU}{c}{\81\015}% U+010D
 12794 % U+010E LATIN CAPITAL LETTER D WITH CARON; Dcaron
 12795 \DeclareTextCompositeCommand{\v}{PU}{D}{\81\016}% U+010E
 12796 % U+010F LATIN SMALL LETTER D WITH CARON; dcaron
 12797 \DeclareTextCompositeCommand{\v}{PU}{d}{\81\017}% U+010F
 12798 % U+0110 LATIN CAPITAL LETTER D WITH STROKE; Dcroat, Dslash

12799 \DeclareTextCommand{\DJ}{PU}{\81\020}% U+0110
12800 % U+0111 LATIN SMALL LETTER D WITH STROKE; dcroat, dmacron
12801 \DeclareTextCommand{\dj}{PU}{\81\021}% U+0111
12802 % U+0112 LATIN CAPITAL LETTER E WITH MACRON; Emacron
12803 \DeclareTextCompositeCommand{\=}{PU}{E}{\81\022}% U+0112
12804 % U+0113 LATIN SMALL LETTER E WITH MACRON; emacron
12805 \DeclareTextCompositeCommand{\=}{PU}{e}{\81\023}% U+0113
12806 % U+0114 LATIN CAPITAL LETTER E WITH BREVE; Ebreve
12807 \DeclareTextCompositeCommand{\u}{PU}{E}{\81\024}% U+0114
12808 % U+0115 LATIN SMALL LETTER E WITH BREVE; ebreve
12809 \DeclareTextCompositeCommand{\u}{PU}{e}{\81\025}% U+0115
12810 % U+0116 LATIN CAPITAL LETTER E WITH DOT ABOVE; Edot, Edotaccent
12811 \DeclareTextCompositeCommand{\.}{PU}{E}{\81\026}% U+0116
12812 % U+0117 LATIN SMALL LETTER E WITH DOT ABOVE; edot, edotaccent
12813 \DeclareTextCompositeCommand{\.}{PU}{e}{\81\027}% U+0117
12814 % U+0118 LATIN CAPITAL LETTER E WITH OGONEK; Eogonek
12815 \DeclareTextCompositeCommand{\k}{PU}{E}{\81\030}% U+0118
12816 % U+0119 LATIN SMALL LETTER E WITH OGONEK; eogonek
12817 \DeclareTextCompositeCommand{\k}{PU}{e}{\81\031}% U+0119
12818 % U+011A LATIN CAPITAL LETTER E WITH CARON; Ecaron
12819 \DeclareTextCompositeCommand{\v}{PU}{E}{\81\032}% U+011A
12820 % U+011B LATIN SMALL LETTER E WITH CARON; ecaron
12821 \DeclareTextCompositeCommand{\v}{PU}{e}{\81\033}% U+011B
12822 % U+011C LATIN CAPITAL LETTER G WITH CIRCUMFLEX; Gcircumflex
12823 \DeclareTextCompositeCommand{\^}{PU}{G}{\81\034}% U+011C
12824 % U+011D LATIN SMALL LETTER G WITH CIRCUMFLEX; gcircumflex
12825 \DeclareTextCompositeCommand{\^}{PU}{g}{\81\035}% U+011D
12826 % U+011E LATIN CAPITAL LETTER G WITH BREVE; Gbreve
12827 \DeclareTextCompositeCommand{\u}{PU}{G}{\81\036}% U+011E
12828 % U+011F LATIN SMALL LETTER G WITH BREVE; gbreve
12829 \DeclareTextCompositeCommand{\u}{PU}{g}{\81\037}% U+011F
12830 % U+0120 LATIN CAPITAL LETTER G WITH DOT ABOVE; Gdot, Gdotaccent
12831 \DeclareTextCompositeCommand{\.}{PU}{G}{\81\040}% U+0120
12832 % U+0121 LATIN SMALL LETTER G WITH DOT ABOVE; gdot, gdotaccent
12833 \DeclareTextCompositeCommand{\.}{PU}{g}{\81\041}% U+0121
12834 % U+0122 LATIN CAPITAL LETTER G WITH CEDILLA; Gcedilla, Gcommaaccent
12835 \DeclareTextCompositeCommand{\c}{PU}{G}{\81\042}% U+0122
12836 % U+0123 LATIN SMALL LETTER G WITH CEDILLA; gcedilla, gcommaaccent
12837 \DeclareTextCompositeCommand{\c}{PU}{g}{\81\043}% U+0123
12838 % U+0124 LATIN CAPITAL LETTER H WITH CIRCUMFLEX; Hcircumflex
12839 \DeclareTextCompositeCommand{\^}{PU}{H}{\81\044}% U+0124
12840 % U+0125 LATIN SMALL LETTER H WITH CIRCUMFLEX; hcircumflex
12841 \DeclareTextCompositeCommand{\^}{PU}{h}{\81\045}% U+0125
12842 % U+0126 LATIN CAPITAL LETTER H WITH STROKE; Hbar
12843 \DeclareTextCommand{\textHslash}{PU}{\81\046}% U+0126
12844 % U+0127 LATIN SMALL LETTER H WITH STROKE; hbar
12845 \DeclareTextCommand{\texthslash}{PU}{\81\047}% U+0127
12846 % U+0128 LATIN CAPITAL LETTER I WITH TILDE; Itilde
12847 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
12848 % U+0129 LATIN SMALL LETTER I WITH TILDE; itilde
12849 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
12850 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
12851 % U+012A LATIN CAPITAL LETTER I WITH MACRON; Imacron
12852 \DeclareTextCompositeCommand{\=}{PU}{I}{\81\052}% U+012A
12853 % U+012B LATIN SMALL LETTER I WITH MACRON; imacron
12854 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
12855 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B

```

12856 % U+012C LATIN CAPITAL LETTER I WITH BREVE; Ibreve
12857 \DeclareTextCompositeCommand{\u}{PU}{I}{\81\054}% U+012C
12858 % U+012D LATIN SMALL LETTER I WITH BREVE; ibreve
12859 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
12860 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
12861 % U+012E LATIN CAPITAL LETTER I WITH OGONEK; Iogonek
12862 \DeclareTextCompositeCommand{\k}{PU}{I}{\81\056}% U+012E
12863 % U+012F LATIN SMALL LETTER I WITH OGONEK; iogonek
12864 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
12865 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
12866 % U+0130 LATIN CAPITAL LETTER I WITH DOT ABOVE; Idot, Idotaccent
12867 \DeclareTextCompositeCommand{\.}{PU}{I}{\81\060}% U+0130
12868 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
12869 \DeclareTextCompositeCommand{\i}{PU}{i}{\81\061}% U+0131
12870 % U+0132 LATIN CAPITAL LIGATURE IJ; IJ
12871 \DeclareTextCommand{\IJ}{PU}{\81\062}% U+0132
12872 % U+0133 LATIN SMALL LIGATURE IJ; ij
12873 \DeclareTextCommand{\ij}{PU}{\81\063}% U+0133
12874 % U+0134 LATIN CAPITAL LETTER J WITH CIRCUMFLEX; Jcircumflex
12875 \DeclareTextCompositeCommand{\^}{PU}{J}{\81\064}% U+0134
12876 % U+0135 LATIN SMALL LETTER J WITH CIRCUMFLEX; jcircumflex
12877 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
12878 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
12879 % U+0136 LATIN CAPITAL LETTER K WITH CEDILLA; Kcedilla, Kcommaaccent
12880 \DeclareTextCompositeCommand{\c}{PU}{K}{\81\066}% U+0136
12881 % U+0137 LATIN SMALL LETTER K WITH CEDILLA; kcedilla, kcommaaccent
12882 \DeclareTextCompositeCommand{\c}{PU}{k}{\81\067}% U+0137

```

The canonical name of U+0138, small letter kra, would be `\textkgreenlandic`, following the glyph naming convention. However `latex/base/inputenc.dtx` has chosen `\textkra`.

```

12883 % U+0138 LATIN SMALL LETTER KRA; kgreenlandic
12884 \DeclareTextCommand{\textkra}{PU}{\81\070}% U+0138
12885 % U+0139 LATIN CAPITAL LETTER L WITH ACUTE; Lacute
12886 \DeclareTextCompositeCommand{\'}{PU}{L}{\81\071}% U+0139
12887 % U+013A LATIN SMALL LETTER L WITH ACUTE; lacute
12888 \DeclareTextCompositeCommand{\'}{PU}{l}{\81\072}% U+013A
12889 % U+013B LATIN CAPITAL LETTER L WITH CEDILLA; Lcedilla, Lcommaaccent
12890 \DeclareTextCompositeCommand{\c}{PU}{L}{\81\073}% U+013B
12891 % U+013C LATIN SMALL LETTER L WITH CEDILLA; lcedilla, lcommaaccent
12892 \DeclareTextCompositeCommand{\c}{PU}{l}{\81\074}% U+013C
12893 % U+013D LATIN CAPITAL LETTER L WITH CARON; Lcaron
12894 \DeclareTextCompositeCommand{\v}{PU}{L}{\81\075}% U+013D
12895 % U+013E LATIN SMALL LETTER L WITH CARON; lcaron
12896 \DeclareTextCompositeCommand{\v}{PU}{l}{\81\076}% U+013E

```

There seems to be no variants of letters ‘L’ and ‘l’ with a dot above (reasonable). Therefore the `\.` accent is reused instead of making a separate accent macro `\textmiddledot`.

```

12897 % U+013F LATIN CAPITAL LETTER L WITH MIDDLE DOT; Ldot, Ldotaccent
12898 \DeclareTextCompositeCommand{\.}{PU}{L}{\81\077}% U+013F
12899 % U+0140 LATIN SMALL LETTER L WITH MIDDLE DOT; ldot, ldotaccent
12900 \DeclareTextCompositeCommand{\.}{PU}{l}{\81\100}% U+0140
12901 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
12902 \DeclareTextCommand{\L}{PU}{\81\101}% U+0141
12903 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
12904 \DeclareTextCommand{\l}{PU}{\81\102}% U+0142
12905 % U+0143 LATIN CAPITAL LETTER N WITH ACUTE; Nacute
12906 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\103}% U+0143

```

12907 % U+0144 LATIN SMALL LETTER N WITH ACUTE; nacute
12908 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\104}% U+0144
12909 % U+0145 LATIN CAPITAL LETTER N WITH CEDILLA; Ncedilla, Ncommaaccent
12910 \DeclareTextCompositeCommand{\c}{PU}{N}{\81\105}% U+0145
12911 % U+0146 LATIN SMALL LETTER N WITH CEDILLA; ncedilla, ncommaaccent
12912 \DeclareTextCompositeCommand{\c}{PU}{n}{\81\106}% U+0146
12913 % U+0147 LATIN CAPITAL LETTER N WITH CARON; Ncaron
12914 \DeclareTextCompositeCommand{\v}{PU}{N}{\81\107}% U+0147
12915 % U+0148 LATIN SMALL LETTER N WITH CARON; ncaron
12916 \DeclareTextCompositeCommand{\v}{PU}{n}{\81\110}% U+0148
12917 % U+0149 LATIN SMALL LETTER N PRECEDED BY APOSTROPHE; napostrophe, quoterightn
12918 \DeclareTextCommand{\textnapostrophe}{PU}{\81\111}% U+0149
12919 % U+014A LATIN CAPITAL LETTER ENG; Eng
12920 \DeclareTextCommand{\NG}{PU}{\81\112}% U+014A
12921 % U+014B LATIN SMALL LETTER ENG; eng
12922 \DeclareTextCommand{\ng}{PU}{\81\113}% U+014B
12923 % U+014C LATIN CAPITAL LETTER O WITH MACRON; Omacron
12924 \DeclareTextCompositeCommand{\=}{PU}{O}{\81\114}% U+014C
12925 % U+014D LATIN SMALL LETTER O WITH MACRON; omacron
12926 \DeclareTextCompositeCommand{\=}{PU}{o}{\81\115}% U+014D
12927 % U+014E LATIN CAPITAL LETTER O WITH BREVE; Obreve
12928 \DeclareTextCompositeCommand{\u}{PU}{O}{\81\116}% U+014E
12929 % U+014F LATIN SMALL LETTER O WITH BREVE; obreve
12930 \DeclareTextCompositeCommand{\u}{PU}{o}{\81\117}% U+014F
12931 % U+0150 LATIN CAPITAL LETTER O WITH DOUBLE ACUTE; Odblacute, Ohungarumlaut
12932 \DeclareTextCompositeCommand{\H}{PU}{O}{\81\120}% U+0150
12933 % U+0151 LATIN SMALL LETTER O WITH DOUBLE ACUTE; odblacute, ohungarumlaut
12934 \DeclareTextCompositeCommand{\H}{PU}{o}{\81\121}% U+0151
12935 % U+0152 LATIN CAPITAL LIGATURE OE; OE
12936 \DeclareTextCommand{\OE}{PU}{\81\122}% U+0152
12937 % U+0153 LATIN SMALL LIGATURE OE; oe
12938 \DeclareTextCommand{\oe}{PU}{\81\123}% U+0153
12939 % U+0154 LATIN CAPITAL LETTER R WITH ACUTE; Racute
12940 \DeclareTextCompositeCommand{\'}{PU}{R}{\81\124}% U+0154
12941 % U+0155 LATIN SMALL LETTER R WITH ACUTE; racute
12942 \DeclareTextCompositeCommand{\'}{PU}{r}{\81\125}% U+0155
12943 % U+0156 LATIN CAPITAL LETTER R WITH CEDILLA; Rcedilla, Rcommaaccent
12944 \DeclareTextCompositeCommand{\c}{PU}{R}{\81\126}% U+0156
12945 % U+0157 LATIN SMALL LETTER R WITH CEDILLA; rcedilla, rcommaaccent
12946 \DeclareTextCompositeCommand{\c}{PU}{r}{\81\127}% U+0157
12947 % U+0158 LATIN CAPITAL LETTER R WITH CARON; Rcaron
12948 \DeclareTextCompositeCommand{\v}{PU}{R}{\81\130}% U+0158
12949 % U+0159 LATIN SMALL LETTER R WITH CARON; rcaron
12950 \DeclareTextCompositeCommand{\v}{PU}{r}{\81\131}% U+0159
12951 % U+015A LATIN CAPITAL LETTER S WITH ACUTE; Sacute
12952 \DeclareTextCompositeCommand{\'}{PU}{S}{\81\132}% U+015A
12953 % U+015B LATIN SMALL LETTER S WITH ACUTE; sacute
12954 \DeclareTextCompositeCommand{\'}{PU}{s}{\81\133}% U+015B
12955 % U+015C LATIN CAPITAL LETTER S WITH CIRCUMFLEX; Scircumflex
12956 \DeclareTextCompositeCommand{\^}{PU}{S}{\81\134}% U+015C
12957 % U+015D LATIN SMALL LETTER S WITH CIRCUMFLEX; scircumflex
12958 \DeclareTextCompositeCommand{\^}{PU}{s}{\81\135}% U+015D
12959 % U+015E LATIN CAPITAL LETTER S WITH CEDILLA; Scedilla
12960 \DeclareTextCompositeCommand{\c}{PU}{S}{\81\136}% U+015E
12961 % U+015F LATIN SMALL LETTER S WITH CEDILLA; scedilla
12962 \DeclareTextCompositeCommand{\c}{PU}{s}{\81\137}% U+015F
12963 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron

12964 \DeclareTextCompositeCommand{\v}{PU}{S}{\81\140}% U+0160
12965 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
12966 \DeclareTextCompositeCommand{\v}{PU}{s}{\81\141}% U+0161
12967 % U+0162 LATIN CAPITAL LETTER T WITH CEDILLA; Tcedilla, Tcommaaccent
12968 \DeclareTextCompositeCommand{\c}{PU}{T}{\81\142}% U+0162
12969 % U+0163 LATIN SMALL LETTER T WITH CEDILLA; tcedilla, tcommaaccent
12970 \DeclareTextCompositeCommand{\c}{PU}{t}{\81\143}% U+0163
12971 % U+0164 LATIN CAPITAL LETTER T WITH CARON; Tcaron
12972 \DeclareTextCompositeCommand{\v}{PU}{T}{\81\144}% U+0164
12973 % U+0165 LATIN SMALL LETTER T WITH CARON; tcaron
12974 \DeclareTextCompositeCommand{\v}{PU}{t}{\81\145}% U+0165
12975 % U+0166 LATIN CAPITAL LETTER T WITH STROKE; Tbar
12976 \DeclareTextCommand{\textTslash}{PU}{\81\146}% U+0166
12977 % U+0167 LATIN SMALL LETTER T WITH STROKE; tbar
12978 \DeclareTextCommand{\texttslash}{PU}{\81\147}% U+0167
12979 % U+0168 LATIN CAPITAL LETTER U WITH TILDE; Utilde
12980 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
12981 % U+0169 LATIN SMALL LETTER U WITH TILDE; utilde
12982 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
12983 % U+016A LATIN CAPITAL LETTER U WITH MACRON; Umacron
12984 \DeclareTextCompositeCommand{\=}{PU}{U}{\81\152}% U+016A
12985 % U+016B LATIN SMALL LETTER U WITH MACRON; umacron
12986 \DeclareTextCompositeCommand{\=}{PU}{u}{\81\153}% U+016B
12987 % U+016C LATIN CAPITAL LETTER U WITH BREVE; Ubreve
12988 \DeclareTextCompositeCommand{\u}{PU}{U}{\81\154}% U+016C
12989 % U+016D LATIN SMALL LETTER U WITH BREVE; ubreve
12990 \DeclareTextCompositeCommand{\u}{PU}{u}{\81\155}% U+016D
12991 % U+016E LATIN CAPITAL LETTER U WITH RING ABOVE; Uring
12992 \DeclareTextCompositeCommand{\r}{PU}{U}{\81\156}% U+016E
12993 % U+016F LATIN SMALL LETTER U WITH RING ABOVE; uring
12994 \DeclareTextCompositeCommand{\r}{PU}{u}{\81\157}% U+016F
12995 % U+0170 LATIN CAPITAL LETTER U WITH DOUBLE ACUTE; Udblacute, Uhungarumlaut
12996 \DeclareTextCompositeCommand{\H}{PU}{U}{\81\160}% U+0170
12997 % U+0171 LATIN SMALL LETTER U WITH DOUBLE ACUTE; udblacute, uhungarumlaut
12998 \DeclareTextCompositeCommand{\H}{PU}{u}{\81\161}% U+0171
12999 % U+0172 LATIN CAPITAL LETTER U WITH OGONEK; Uogonek
13000 \DeclareTextCompositeCommand{\k}{PU}{U}{\81\162}% U+0172
13001 % U+0173 LATIN SMALL LETTER U WITH OGONEK; uogonek
13002 \DeclareTextCompositeCommand{\k}{PU}{u}{\81\163}% U+0173
13003 % U+0174 LATIN CAPITAL LETTER W WITH CIRCUMFLEX; Wcircumflex
13004 \DeclareTextCompositeCommand{\^}{PU}{W}{\81\164}% U+0174
13005 % U+0175 LATIN SMALL LETTER W WITH CIRCUMFLEX; wcircumflex
13006 \DeclareTextCompositeCommand{\^}{PU}{w}{\81\165}% U+0175
13007 % U+0176 LATIN CAPITAL LETTER Y WITH CIRCUMFLEX; Ycircumflex
13008 \DeclareTextCompositeCommand{\^}{PU}{Y}{\81\166}% U+0176
13009 % U+0177 LATIN SMALL LETTER Y WITH CIRCUMFLEX; ycircumflex
13010 \DeclareTextCompositeCommand{\^}{PU}{y}{\81\167}% U+0177
13011 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
13012 \DeclareTextCompositeCommand{\"}{PU}{Y}{\81\170}% U+0178
13013 % U+0179 LATIN CAPITAL LETTER Z WITH ACUTE; Zacute
13014 \DeclareTextCompositeCommand{\'}{PU}{Z}{\81\171}% U+0179
13015 % U+017A LATIN SMALL LETTER Z WITH ACUTE; zacute
13016 \DeclareTextCompositeCommand{\'}{PU}{z}{\81\172}% U+017A
13017 % U+017B LATIN CAPITAL LETTER Z WITH DOT ABOVE; Zdot, Zdotaccent
13018 \DeclareTextCompositeCommand{\.}{PU}{Z}{\81\173}% U+017B
13019 % U+017C LATIN SMALL LETTER Z WITH DOT ABOVE; zdot, zdotaccent
13020 \DeclareTextCompositeCommand{\.}{PU}{z}{\81\174}% U+017C

13021 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
 13022 \DeclareTextCompositeCommand{\v}{PU}{Z}{\81\175}% U+017D
 13023 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 13024 \DeclareTextCompositeCommand{\v}{PU}{z}{\81\176}% U+017E
 13025 % U+017F LATIN SMALL LETTER LONG S; longs, slong
 13026 \DeclareTextCommand{\textlongS}{PU}{\81\177}% U+017F

50.2.5 Latin Extended-B: U+0180 to U+024F

13027 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
 13028 \DeclareTextCommand{\textflorin}{PU}{\81\222}% U+0192
 13029 % U+01CD LATIN CAPITAL LETTER A WITH CARON; Acaron
 13030 \DeclareTextCompositeCommand{\v}{PU}{A}{\81\315}% U+01CD
 13031 % U+01CE LATIN SMALL LETTER A WITH CARON; acaron
 13032 \DeclareTextCompositeCommand{\v}{PU}{a}{\81\316}% U+01CE
 13033 % U+01CF LATIN CAPITAL LETTER I WITH CARON; Icaron
 13034 \DeclareTextCompositeCommand{\v}{PU}{I}{\81\317}% U+01CF
 13035 % U+01D0 LATIN SMALL LETTER I WITH CARON; icaron
 13036 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
 13037 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\320}% U+01D0
 13038 % U+01D1 LATIN CAPITAL LETTER O WITH CARON; Ocaron
 13039 \DeclareTextCompositeCommand{\v}{PU}{O}{\81\321}% U+01D1
 13040 % U+01D2 LATIN SMALL LETTER O WITH CARON; ocaron
 13041 \DeclareTextCompositeCommand{\v}{PU}{o}{\81\322}% U+01D2
 13042 % U+01D3 LATIN CAPITAL LETTER U WITH CARON; Ucaron
 13043 \DeclareTextCompositeCommand{\v}{PU}{U}{\81\323}% U+01D3
 13044 % U+01D4 LATIN SMALL LETTER U WITH CARON; ucaron
 13045 \DeclareTextCompositeCommand{\v}{PU}{u}{\81\324}% U+01D4
 13046 % U+01E4 LATIN CAPITAL LETTER G WITH STROKE; Gstroke
 13047 \DeclareTextCommand{\textGslash}{PU}{\81\344}% U+01E4
 13048 % U+01E5 LATIN SMALL LETTER G WITH STROKE; gstroke
 13049 \DeclareTextCommand{\textgslash}{PU}{\81\345}% U+01E5
 13050 % U+01E6 LATIN CAPITAL LETTER G WITH CARON; Gcaron
 13051 \DeclareTextCompositeCommand{\v}{PU}{G}{\81\346}% U+01E6
 13052 % U+01E7 LATIN SMALL LETTER G WITH CARON; gcaron
 13053 \DeclareTextCompositeCommand{\v}{PU}{g}{\81\347}% U+01E7
 13054 % U+01E8 LATIN CAPITAL LETTER K WITH CARON; Kcaron
 13055 \DeclareTextCompositeCommand{\v}{PU}{K}{\81\350}% U+01E8
 13056 % U+01E9 LATIN SMALL LETTER K WITH CARON; kcaron
 13057 \DeclareTextCompositeCommand{\v}{PU}{k}{\81\351}% U+01E9
 13058 % U+01EA LATIN CAPITAL LETTER O WITH OGONEK; Oogonek
 13059 \DeclareTextCompositeCommand{\k}{PU}{O}{\81\352}% U+01EA
 13060 % U+01EB LATIN SMALL LETTER O WITH OGONEK; oogonek
 13061 \DeclareTextCompositeCommand{\k}{PU}{o}{\81\353}% U+01EB
 13062 % U+01F0 LATIN SMALL LETTER J WITH CARON; jcaron
 13063 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
 13064 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
 13065 % U+01F4 LATIN CAPITAL LETTER G WITH ACUTE; Gacute
 13066 \DeclareTextCompositeCommand{\'}{PU}{G}{\81\364}% U+01F4
 13067 % U+01F5 LATIN SMALL LETTER G WITH ACUTE; gacute
 13068 \DeclareTextCompositeCommand{\'}{PU}{g}{\81\365}% U+01F5
 13069 % U+01F8 LATIN CAPITAL LETTER N WITH GRAVE
 13070 \DeclareTextCompositeCommand{\`}{PU}{N}{\81\370}% U+01F8
 13071 % U+01F9 LATIN SMALL LETTER N WITH GRAVE
 13072 \DeclareTextCompositeCommand{\`}{PU}{n}{\81\371}% U+01F9
 13073 % U+01FC LATIN CAPITAL LETTER AE WITH ACUTE; AEacute
 13074 \DeclareTextCompositeCommand{\'}{PU}{\AE}{\81\374}% U+01FC
 13075 % U+01FD LATIN SMALL LETTER AE WITH ACUTE; aeacute

13076 \DeclareTextCompositeCommand{\'}{PU}{\ae}{\81\375}% U+01FD
13077 % U+01FE LATIN CAPITAL LETTER O WITH STROKE AND ACUTE; *Oslashacute, Ostrokeacut
13078 \DeclareTextCompositeCommand{\'}{PU}{\o}{\81\376}% U+01FE
13079 % U+01FF LATIN SMALL LETTER O WITH STROKE AND ACUTE; *oslashacute, ostrokeacute
13080 \DeclareTextCompositeCommand{\'}{PU}{\o}{\81\377}% U+01FF
13081 % U+0200 LATIN CAPITAL LETTER A WITH DOUBLE GRAVE; Adblgrave
13082 \DeclareTextCompositeCommand{\G}{PU}{A}{\82\000}% U+0200
13083 % U+0201 LATIN SMALL LETTER A WITH DOUBLE GRAVE; adblgrave
13084 \DeclareTextCompositeCommand{\G}{PU}{a}{\82\001}% U+0201
13085 % U+0204 LATIN CAPITAL LETTER E WITH DOUBLE GRAVE; Edblgrave
13086 \DeclareTextCompositeCommand{\G}{PU}{E}{\82\004}% U+0204
13087 % U+0205 LATIN SMALL LETTER E WITH DOUBLE GRAVE; edblgrave
13088 \DeclareTextCompositeCommand{\G}{PU}{e}{\82\005}% U+0205
13089 % U+0208 LATIN CAPITAL LETTER I WITH DOUBLE GRAVE; Idblgrave
13090 \DeclareTextCompositeCommand{\G}{PU}{I}{\82\010}% U+0208
13091 % U+0209 LATIN SMALL LETTER I WITH DOUBLE GRAVE; idblgrave
13092 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
13093 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
13094 % U+020C LATIN CAPITAL LETTER O WITH DOUBLE GRAVE; Odblgrave
13095 \DeclareTextCompositeCommand{\G}{PU}{O}{\82\014}% U+020C
13096 % U+020D LATIN SMALL LETTER O WITH DOUBLE GRAVE; odblgrave
13097 \DeclareTextCompositeCommand{\G}{PU}{o}{\82\015}% U+020D
13098 % U+0210 LATIN CAPITAL LETTER R WITH DOUBLE GRAVE; Rdblgrave
13099 \DeclareTextCompositeCommand{\G}{PU}{R}{\82\020}% U+0210
13100 % U+0211 LATIN SMALL LETTER R WITH DOUBLE GRAVE; rdblgrave
13101 \DeclareTextCompositeCommand{\G}{PU}{r}{\82\021}% U+0211
13102 % U+0214 LATIN CAPITAL LETTER U WITH DOUBLE GRAVE; Udblgrave
13103 \DeclareTextCompositeCommand{\G}{PU}{U}{\82\024}% U+0214
13104 % U+0215 LATIN SMALL LETTER U WITH DOUBLE GRAVE; udblgrave
13105 \DeclareTextCompositeCommand{\G}{PU}{u}{\82\025}% U+0215
13106 % U+021E LATIN CAPITAL LETTER H WITH CARON
13107 \DeclareTextCompositeCommand{\v}{PU}{H}{\82\036}% U+021E
13108 % U+021F LATIN SMALL LETTER H WITH CARON
13109 \DeclareTextCompositeCommand{\v}{PU}{h}{\82\037}% U+021F
13110 % U+0226 LATIN CAPITAL LETTER A WITH DOT ABOVE
13111 \DeclareTextCompositeCommand{\.}{PU}{A}{\82\046}% U+0226
13112 % U+0227 LATIN SMALL LETTER A WITH DOT ABOVE
13113 \DeclareTextCompositeCommand{\.}{PU}{a}{\82\047}% U+0227
13114 % U+0228 LATIN CAPITAL LETTER E WITH CEDILLA
13115 \DeclareTextCompositeCommand{\c}{PU}{E}{\82\050}% U+0228
13116 % U+0229 LATIN SMALL LETTER E WITH CEDILLA
13117 \DeclareTextCompositeCommand{\c}{PU}{e}{\82\051}% U+0229
13118 % U+022E LATIN CAPITAL LETTER O WITH DOT ABOVE
13119 \DeclareTextCompositeCommand{\.}{PU}{O}{\82\056}% U+022E
13120 % U+022F LATIN SMALL LETTER O WITH DOT ABOVE
13121 \DeclareTextCompositeCommand{\.}{PU}{o}{\82\057}% U+022F
13122 % U+0232 LATIN CAPITAL LETTER Y WITH MACRON
13123 \DeclareTextCompositeCommand{\=}{PU}{Y}{\82\062}% U+0232
13124 % U+0233 LATIN SMALL LETTER Y WITH MACRON
13125 \DeclareTextCompositeCommand{\=}{PU}{y}{\82\063}% U+0233
13126 % U+0237 LATIN SMALL LETTER DOTLESS J
13127 \DeclareTextCommand{\j}{PU}{\82\067}% U+0237

50.2.6 Spacing Modifier Letters: U+02B0 to U+02FF

13128 % U+02C7 CARON; caron
13129 \DeclareTextCommand{\textasciicaron}{PU}{\82\307}% U+02C7
13130 % U+02D8 BREVE; breve

13131 \DeclareTextCommand{\textasciibreve}{PU}{\82\330}% U+02D8
 13132 % U+02D9 DOT ABOVE; dotaccent
 13133 \DeclareTextCommand{\textdotaccent}{PU}{\82\331}% U+02D9
 13134 % U+02DA RING ABOVE; ring
 13135 \DeclareTextCommand{\textring}{PU}{\82\332}% U+02DA
 13136 % U+02DB OGONEK; ogonek
 13137 \DeclareTextCommand{\textogonek}{PU}{\82\333}% U+02DB
 13138 % U+02DC SMALL TILDE; ilde, *tilde
 13139 \DeclareTextCommand{\texttilde}{PU}{\82\334}% U+02DC
 13140 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
 13141 \DeclareTextCommand{\texthungarumlaut}{PU}{\82\335}% U+02DD
 13142 \DeclareTextCommand{\textacutedbl}{PU}{\texthungarumlaut}% U+02DD
 13143 % U+02F5 MODIFIER LETTER MIDDLE DOUBLE GRAVE ACCENT
 13144 \DeclareTextCommand{\textgravedbl}{PU}{\82\365}% U+02F5
 13145 % U+02F7 MODIFIER LETTER LOW TILDE
 13146 \DeclareTextCommand{\texttildelow}{PU}{\82\367}% U+02F7

50.2.7 Combining Diacritical Marks: U+0300 to U+036F

13147 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
 13148 \DeclareTextCommand{\textdoublegrave}{PU}{\83\017}% U+030F
 13149 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
 13150 \DeclareTextCommand{\textnewtie}{PU}{\83\021}% U+0311
 13151 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcmb
 13152 \DeclareTextCommand{\textdotbelow}{PU}{\83\043}% U+0323
 13153 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
 13154 \DeclareTextCommand{\textmacronbelow}{PU}{\83\061}% U+0331
 13155 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
 13156 \DeclareTextCommand{\texttie}{PU}{\83\141}% U+0361

50.2.8 Greek and Coptic: U+0370 to U+03FF

13157 % U+0374 GREEK NUMERAL SIGN; numeralsigngreek
 13158 \DeclareTextCommand{\textnumeralsigngreek}{PU}{\83\164}% U+0374
 13159 % U+0375 GREEK LOWER NUMERAL SIGN; numeralsignlowergreek
 13160 \DeclareTextCommand{\textnumeralsignlowergreek}{PU}{\83\165}% U+0375
 13161 % U+0386 GREEK CAPITAL LETTER ALPHA WITH TONOS; Alphatonos
 13162 \DeclareTextCompositeCommand{\'}{PU}{\textAlpha}{\83\206}% U+0386
 13163 % U+0388 GREEK CAPITAL LETTER EPSILON WITH TONOS; Epsilontonos
 13164 \DeclareTextCompositeCommand{\'}{PU}{\textEpsilon}{\83\210}% U+0388
 13165 % U+0389 GREEK CAPITAL LETTER ETA WITH TONOS; Etatonos
 13166 \DeclareTextCompositeCommand{\'}{PU}{\textEta}{\83\211}% U+0389
 13167 % U+038A GREEK CAPITAL LETTER IOTA WITH TONOS; Iotatonos
 13168 \DeclareTextCompositeCommand{\'}{PU}{\textIota}{\83\212}% U+038A
 13169 % U+038C GREEK CAPITAL LETTER OMICRON WITH TONOS; Omicrontonos
 13170 \DeclareTextCompositeCommand{\'}{PU}{\textOmicron}{\83\214}% U+038C
 13171 % U+038E GREEK CAPITAL LETTER UPSILON WITH TONOS; Upsilonontonos
 13172 \DeclareTextCompositeCommand{\'}{PU}{\textUpsilon}{\83\216}% U+038E
 13173 % U+038F GREEK CAPITAL LETTER OMEGA WITH TONOS; Megatonos
 13174 \DeclareTextCompositeCommand{\'}{PU}{\textOmega}{\83\217}% U+038F
 13175 % U+0390 GREEK SMALL LETTER IOTA WITH DIALYTIKA AND TONOS; iotadieresis-tonos
 13176 \DeclareTextCompositeCommand{\'}{PU}{\textIotadieresis}{\83\220}% U+0390
 13177 % U+0391 GREEK CAPITAL LETTER ALPHA; Alpha
 13178 \DeclareTextCommand{\textAlpha}{PU}{\83\221}% U+0391
 13179 % U+0392 GREEK CAPITAL LETTER BETA; Beta
 13180 \DeclareTextCommand{\textBeta}{PU}{\83\222}% U+0392
 13181 % U+0393 GREEK CAPITAL LETTER GAMMA; Gamma
 13182 \DeclareTextCommand{\textGamma}{PU}{\83\223}% U+0393
 13183 % U+0394 GREEK CAPITAL LETTER DELTA; Deltagreek, *Delta

13184 \DeclareTextCommand{\textDelta}{PU}{\83\224}% U+0394
13185 % U+0395 GREEK CAPITAL LETTER EPSILON; Epsilon
13186 \DeclareTextCommand{\textEpsilon}{PU}{\83\225}% U+0395
13187 % U+0396 GREEK CAPITAL LETTER ZETA; Zeta
13188 \DeclareTextCommand{\textZeta}{PU}{\83\226}% U+0396
13189 % U+0397 GREEK CAPITAL LETTER ETA; Eta
13190 \DeclareTextCommand{\textEta}{PU}{\83\227}% U+0397
13191 % U+0398 GREEK CAPITAL LETTER THETA; Theta
13192 \DeclareTextCommand{\textTheta}{PU}{\83\230}% U+0398
13193 % U+0399 GREEK CAPITAL LETTER IOTA; Iota
13194 \DeclareTextCommand{\textIota}{PU}{\83\231}% U+0399
13195 % U+039A GREEK CAPITAL LETTER KAPPA; Kappa
13196 \DeclareTextCommand{\textKappa}{PU}{\83\232}% U+039A
13197 % U+039B GREEK CAPITAL LETTER LAMDA; Lambda
13198 \DeclareTextCommand{\textLambda}{PU}{\83\233}% U+039B
13199 % U+039C GREEK CAPITAL LETTER MU; Mu
13200 \DeclareTextCommand{\textMu}{PU}{\83\234}% U+039C
13201 % U+039D GREEK CAPITAL LETTER NU; Nu
13202 \DeclareTextCommand{\textNu}{PU}{\83\235}% U+039D
13203 % U+039E GREEK CAPITAL LETTER XI; Xi
13204 \DeclareTextCommand{\textXi}{PU}{\83\236}% U+039E
13205 % U+039F GREEK CAPITAL LETTER OMICRON; Omicron
13206 \DeclareTextCommand{\textOmicron}{PU}{\83\237}% U+039F
13207 % U+03A0 GREEK CAPITAL LETTER PI; Pi
13208 \DeclareTextCommand{\textPi}{PU}{\83\240}% U+03A0
13209 % U+03A1 GREEK CAPITAL LETTER RHO; Rho
13210 \DeclareTextCommand{\textRho}{PU}{\83\241}% U+03A1
13211 % U+03A3 GREEK CAPITAL LETTER SIGMA; Sigma
13212 \DeclareTextCommand{\textSigma}{PU}{\83\243}% U+03A3
13213 % U+03A4 GREEK CAPITAL LETTER TAU; Tau
13214 \DeclareTextCommand{\textTau}{PU}{\83\244}% U+03A4
13215 % U+03A5 GREEK CAPITAL LETTER UPSILON; Upsilon
13216 \DeclareTextCommand{\textUpsilon}{PU}{\83\245}% U+03A5
13217 % U+03A6 GREEK CAPITAL LETTER PHI; Phi
13218 \DeclareTextCommand{\textPhi}{PU}{\83\246}% U+03A6
13219 % U+03A7 GREEK CAPITAL LETTER CHI; Chi
13220 \DeclareTextCommand{\textChi}{PU}{\83\247}% U+03A7
13221 % U+03A8 GREEK CAPITAL LETTER PSI; Psi
13222 \DeclareTextCommand{\textPsi}{PU}{\83\250}% U+03A8
13223 % U+03A9 GREEK CAPITAL LETTER OMEGA; Omegagreek, *Omega
13224 \DeclareTextCommand{\textOmega}{PU}{\83\251}% U+03A9
13225 % U+03AA GREEK CAPITAL LETTER IOTA WITH DIALYTIKA; Iotadieresis
13226 \DeclareTextCommand{\textIotadieresis}{PU}{\83\252}% U+03AA
13227 \DeclareTextCompositeCommand{"}{PU}{\textIota}{\83\252}% U+03AA
13228 % U+03AB GREEK CAPITAL LETTER UPSILON WITH DIALYTIKA; Upsilondieresis
13229 \DeclareTextCompositeCommand{"}{PU}{\textUpsilon}{\83\253}% U+03AB
13230 % U+03AC GREEK SMALL LETTER ALPHA WITH TONOS; alphanos
13231 \DeclareTextCompositeCommand{'}{PU}{\textalpha}{\83\254}% U+03AC
13232 % U+03AD GREEK SMALL LETTER EPSILON WITH TONOS; epsilon
13233 \DeclareTextCompositeCommand{'}{PU}{\textepsilon}{\83\255}% U+03AD
13234 % U+03AE GREEK SMALL LETTER ETA WITH TONOS; etanos
13235 \DeclareTextCompositeCommand{'}{PU}{\texteta}{\83\256}% U+03AE
13236 % U+03AF GREEK SMALL LETTER IOTA WITH TONOS; iotanos
13237 \DeclareTextCompositeCommand{'}{PU}{\textiota}{\83\257}% U+03AF
13238 % U+03B0 GREEK SMALL LETTER UPSILON WITH DIALYTIKA AND TONOS; upsilondieresis
13239 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\260}% U+03B0
13240 % U+03B1 GREEK SMALL LETTER ALPHA; alpha

13241 \DeclareTextCommand{\textalpha}{PU}{\83\261}% U+03B1
13242 % U+03B2 GREEK SMALL LETTER BETA; beta
13243 \DeclareTextCommand{\textbeta}{PU}{\83\262}% U+03B2
13244 % U+03B3 GREEK SMALL LETTER GAMMA; gamma
13245 \DeclareTextCommand{\textgamma}{PU}{\83\263}% U+03B3
13246 % U+03B4 GREEK SMALL LETTER DELTA; delta
13247 \DeclareTextCommand{\textdelta}{PU}{\83\264}% U+03B4
13248 % U+03B5 GREEK SMALL LETTER EPSILON; epsilon
13249 \DeclareTextCommand{\textepsilon}{PU}{\83\265}% U+03B5
13250 % U+03B6 GREEK SMALL LETTER ZETA; zeta
13251 \DeclareTextCommand{\textzeta}{PU}{\83\266}% U+03B6
13252 % U+03B7 GREEK SMALL LETTER ETA; eta
13253 \DeclareTextCommand{\texteta}{PU}{\83\267}% U+03B7
13254 % U+03B8 GREEK SMALL LETTER THETA; theta
13255 \DeclareTextCommand{\texttheta}{PU}{\83\270}% U+03B8
13256 % U+03B9 GREEK SMALL LETTER IOTA; iota
13257 \DeclareTextCommand{\textiota}{PU}{\83\271}% U+03B9
13258 % U+03BA GREEK SMALL LETTER KAPPA; kappa
13259 \DeclareTextCommand{\textkappa}{PU}{\83\272}% U+03BA
13260 % U+03BB GREEK SMALL LETTER LAMDA; lambda
13261 \DeclareTextCommand{\textlambda}{PU}{\83\273}% U+03BB
13262 % U+03BC GREEK SMALL LETTER MU; mugreek, *mu
13263 \DeclareTextCommand{\textmugreek}{PU}{\83\274}% U+03BC
13264 % U+03BD GREEK SMALL LETTER NU; nu
13265 \DeclareTextCommand{\textnu}{PU}{\83\275}% U+03BD
13266 % U+03BE GREEK SMALL LETTER XI; xi
13267 \DeclareTextCommand{\textxi}{PU}{\83\276}% U+03BE
13268 % U+03BF GREEK SMALL LETTER OMICRON; omicron
13269 \DeclareTextCommand{\textomicron}{PU}{\83\277}% U+03BF
13270 % U+03C0 GREEK SMALL LETTER PI; pi
13271 \DeclareTextCommand{\textpi}{PU}{\83\300}% U+03C0
13272 % U+03C1 GREEK SMALL LETTER RHO; rho
13273 \DeclareTextCommand{\textrho}{PU}{\83\301}% U+03C1
13274 % U+03C2 GREEK SMALL LETTER FINAL SIGMA; *sigma1, sigmafinal
13275 \DeclareTextCommand{\textvarsigma}{PU}{\83\302}% U+03C2
13276 % U+03C3 GREEK SMALL LETTER SIGMA; sigma
13277 \DeclareTextCommand{\textsigma}{PU}{\83\303}% U+03C3
13278 % U+03C4 GREEK SMALL LETTER TAU; tau
13279 \DeclareTextCommand{\texttau}{PU}{\83\304}% U+03C4
13280 % U+03C5 GREEK SMALL LETTER UPSILON; upsilon
13281 \DeclareTextCommand{\textupsilon}{PU}{\83\305}% U+03C5
13282 % U+03C6 GREEK SMALL LETTER PHI; phi
13283 \DeclareTextCommand{\textphi}{PU}{\83\306}% U+03C6
13284 % U+03C7 GREEK SMALL LETTER CHI; chi
13285 \DeclareTextCommand{\textchi}{PU}{\83\307}% U+03C7
13286 % U+03C8 GREEK SMALL LETTER PSI; psi
13287 \DeclareTextCommand{\textpsi}{PU}{\83\310}% U+03C8
13288 % U+03C9 GREEK SMALL LETTER OMEGA; omega
13289 \DeclareTextCommand{\textomega}{PU}{\83\311}% U+03C9
13290 % U+03CA GREEK SMALL LETTER IOTA WITH DIALYTIKA; iotadieresis
13291 \DeclareTextCompositeCommand{"}{PU}{\textiota}{\83\312}% U+03CA
13292 % U+03CB GREEK SMALL LETTER UPSILON WITH DIALYTIKA; upsilondieresis
13293 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\313}% U+03CB
13294 % U+03CC GREEK SMALL LETTER OMICRON WITH TONOS; omicrontonos
13295 \DeclareTextCompositeCommand{'}{PU}{\textomicron}{\83\314}% U+03CC
13296 % U+03CD GREEK SMALL LETTER UPSILON WITH TONOS; upsilontonos
13297 \DeclareTextCommand{\textupsilonacute}{PU}{\83\315}% U+03CD

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13298 \DeclareTextCompositeCommand{\'}{PU}{\textupsilon}{\83\315}% U+03CD
13299 % U+03CE GREEK SMALL LETTER OMEGA WITH TONOS; omegatonos
13300 \DeclareTextCompositeCommand{\'}{PU}{\textomega}{\83\316}% U+03CE
13301 % U+03DA GREEK LETTER STIGMA; Stigmagreek
13302 \DeclareTextCommand{\textStigmagreek}{PU}{\83\332}% U+03DA
13303 % U+03DB GREEK SMALL LETTER STIGMA
13304 \DeclareTextCommand{\textstigmagreek}{PU}{\83\333}% U+03DB
13305 % U+03DC GREEK LETTER DIGAMMA; Digammagreek
13306 \DeclareTextCommand{\textDigammagreek}{PU}{\83\334}% U+03DC
13307 % U+03DD GREEK SMALL LETTER DIGAMMA
13308 \DeclareTextCommand{\textdigammagreek}{PU}{\83\335}% U+03DD
13309 % U+03DE GREEK LETTER KOPPA; Koppagreek
13310 \DeclareTextCommand{\textKoppagreek}{PU}{\83\336}% U+03DE
13311 % U+03DF GREEK SMALL LETTER KOPPA
13312 \DeclareTextCommand{\textkoppagreek}{PU}{\83\337}% U+03DF
13313 % U+03E0 GREEK LETTER SAMPI; Sampigreek
13314 \DeclareTextCommand{\textSampigreek}{PU}{\83\340}% U+03E0
13315 % U+03E1 GREEK SMALL LETTER SAMPI
13316 \DeclareTextCommand{\textsampigreek}{PU}{\83\341}% U+03E1

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50.2.9 Cyrillic: U+0400 to U+04FF

Thanks to Vladimir Volovich (vvv@vvv.vsu.ru) for the help with the Cyrillic glyph names.

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13317 % U+0400 CYRILLIC CAPITAL LETTER IE WITH GRAVE
13318 \DeclareTextCompositeCommand{\'}{PU}{\CYRE}{\84\000}% U+0400
13319 % U+0401 CYRILLIC CAPITAL LETTER IO; Iocyrrillic, *afii10023
13320 \DeclareTextCommand{\CYRYO}{PU}{\84\001}% U+0401
13321 \DeclareTextCompositeCommand{\"}{PU}{\CYRE}{\84\001}% ???
13322 % U+0402 CYRILLIC CAPITAL LETTER DJE; Djecyrillic, *afii10051
13323 \DeclareTextCommand{\CYRDJE}{PU}{\84\002}% U+0402
13324 % U+0403 CYRILLIC CAPITAL LETTER GJE; Gjecyrillic, *afii10052
13325 \DeclareTextCompositeCommand{\'}{PU}{\CYRG}{\84\003}% U+0403
13326 % U+0404 CYRILLIC CAPITAL LETTER UKRAINIAN IE; Ecyrrillic, *afii10053
13327 \DeclareTextCommand{\CYRIE}{PU}{\84\004}% U+0404
13328 % U+0405 CYRILLIC CAPITAL LETTER DZE; Dzecyrillic, *afii10054
13329 \DeclareTextCommand{\CYRDZE}{PU}{\84\005}% U+0405
13330 % U+0406 CYRILLIC CAPITAL LETTER BYELORUSSIAN-UKRAINIAN I; Icyrrillic, *afii10055
13331 \DeclareTextCommand{\CYRII}{PU}{\84\006}% U+0406
13332 % U+0407 CYRILLIC CAPITAL LETTER YI; Yicyrrillic, *afii10056
13333 \DeclareTextCommand{\CYRYI}{PU}{\84\007}% U+0407
13334 \DeclareTextCompositeCommand{\"}{PU}{\CYRII}{\84\007}% U+0407
13335 % U+0408 CYRILLIC CAPITAL LETTER JE; Jecyrillic, *afii10057
13336 \DeclareTextCommand{\CYRJE}{PU}{\84\010}% U+0408
13337 % U+0409 CYRILLIC CAPITAL LETTER LJE; Ljecyrillic, *afii10058
13338 \DeclareTextCommand{\CYRLJE}{PU}{\84\011}% U+0409
13339 % U+040A CYRILLIC CAPITAL LETTER NJE; Njecyrillic, *afii10059
13340 \DeclareTextCommand{\CYRNJE}{PU}{\84\012}% U+040A
13341 % U+040B CYRILLIC CAPITAL LETTER TSHE; Tshecyrillic, *afii10060
13342 \DeclareTextCommand{\CYRTSHE}{PU}{\84\013}% U+040B
13343 % U+040C CYRILLIC CAPITAL LETTER KJE; Kjecyrillic, *afii10061
13344 \DeclareTextCompositeCommand{\'}{PU}{\CYRK}{\84\014}% U+040C
13345 % U+040D CYRILLIC CAPITAL LETTER I WITH GRAVE
13346 \DeclareTextCompositeCommand{\'}{PU}{\CYRI}{\84\015}% U+040D
13347 % U+040E CYRILLIC CAPITAL LETTER SHORT U; Ushortcyrrillic, *afii10062
13348 \DeclareTextCommand{\CYRUSHRT}{PU}{\84\016}% U+040E
13349 \DeclareTextCompositeCommand{\U}{PU}{\CYRU}{\84\016}% U+040E
13350 % U+040F CYRILLIC CAPITAL LETTER DZHE; Dzhecyrillic, *afii10145

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13351 \DeclareTextCommand{\CYRDZHE}{PU}{\84\017}% U+040F
13352 % U+0410 CYRILLIC CAPITAL LETTER A; Acyrillic, *afii10017
13353 \DeclareTextCommand{\CYRA}{PU}{\84\020}% U+0410
13354 % U+0411 CYRILLIC CAPITAL LETTER BE; Becyrillic, *afii10018
13355 \DeclareTextCommand{\CYRB}{PU}{\84\021}% U+0411
13356 % U+0412 CYRILLIC CAPITAL LETTER VE; Vecyrillic, *afii10019
13357 \DeclareTextCommand{\CYRV}{PU}{\84\022}% U+0412
13358 % U+0413 CYRILLIC CAPITAL LETTER GHE; Gecyrillic, *afii10020
13359 \DeclareTextCommand{\CYRG}{PU}{\84\023}% U+0413
13360 % U+0414 CYRILLIC CAPITAL LETTER DE; Decyrillic, *afii10021
13361 \DeclareTextCommand{\CYRD}{PU}{\84\024}% U+0414
13362 % U+0415 CYRILLIC CAPITAL LETTER IE; Iecyrillic, *afii10022
13363 \DeclareTextCommand{\CYRE}{PU}{\84\025}% U+0415
13364 % U+0416 CYRILLIC CAPITAL LETTER ZHE; Zhecyrillic, *afii10024
13365 \DeclareTextCommand{\CYRZH}{PU}{\84\026}% U+0416
13366 % U+0417 CYRILLIC CAPITAL LETTER ZE; Zecyrillic, *afii10025
13367 \DeclareTextCommand{\CYRZ}{PU}{\84\027}% U+0417
13368 % U+0418 CYRILLIC CAPITAL LETTER I; Iicyrillic, *afii10026
13369 \DeclareTextCommand{\CYRI}{PU}{\84\030}% U+0418
13370 % U+0419 CYRILLIC CAPITAL LETTER SHORT I; Iishortcyrillic, *afii10027
13371 \DeclareTextCommand{\CYRISHRT}{PU}{\84\031}% U+0419
13372 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\031}% U+0419
13373 % U+041A CYRILLIC CAPITAL LETTER KA; Kacyrillic, *afii10028
13374 \DeclareTextCommand{\CYRK}{PU}{\84\032}% U+041A
13375 % U+041B CYRILLIC CAPITAL LETTER EL; Elcyrillic, *afii10029
13376 \DeclareTextCommand{\CYRL}{PU}{\84\033}% U+041B
13377 % U+041C CYRILLIC CAPITAL LETTER EM; Emcyrillic, *afii10030
13378 \DeclareTextCommand{\CYRM}{PU}{\84\034}% U+041C
13379 % U+041D CYRILLIC CAPITAL LETTER EN; Encyrillic, *afii10031
13380 \DeclareTextCommand{\CYRN}{PU}{\84\035}% U+041D
13381 % U+041E CYRILLIC CAPITAL LETTER O; Ocyrillic, *afii10032
13382 \DeclareTextCommand{\CYRO}{PU}{\84\036}% U+041E
13383 % U+041F CYRILLIC CAPITAL LETTER PE; Pecyrillic, *afii10033
13384 \DeclareTextCommand{\CYRP}{PU}{\84\037}% U+041F
13385 % U+0420 CYRILLIC CAPITAL LETTER ER; Ercyrillic, *afii10034
13386 \DeclareTextCommand{\CYRR}{PU}{\84\040}% U+0420
13387 % U+0421 CYRILLIC CAPITAL LETTER ES; Escyrillic, *afii10035
13388 \DeclareTextCommand{\CYRS}{PU}{\84\041}% U+0421
13389 % U+0422 CYRILLIC CAPITAL LETTER TE; Tecyrillic, *afii10036
13390 \DeclareTextCommand{\CYRT}{PU}{\84\042}% U+0422
13391 % U+0423 CYRILLIC CAPITAL LETTER U; Ucyrillic, *afii10037
13392 \DeclareTextCommand{\CYRU}{PU}{\84\043}% U+0423
13393 % U+0424 CYRILLIC CAPITAL LETTER EF; Efcyrillic, *afii10038
13394 \DeclareTextCommand{\CYRF}{PU}{\84\044}% U+0424
13395 % U+0425 CYRILLIC CAPITAL LETTER HA; Khacyrillic, *afii10039
13396 \DeclareTextCommand{\CYRH}{PU}{\84\045}% U+0425
13397 % U+0426 CYRILLIC CAPITAL LETTER TSE; Tsecyrillic, *afii10040
13398 \DeclareTextCommand{\CYRC}{PU}{\84\046}% U+0426
13399 % U+0427 CYRILLIC CAPITAL LETTER CHE; Checyrillic, *afii10041
13400 \DeclareTextCommand{\CYRCH}{PU}{\84\047}% U+0427
13401 % U+0428 CYRILLIC CAPITAL LETTER SHA; Shacyrillic, *afii10042
13402 \DeclareTextCommand{\CYRSH}{PU}{\84\050}% U+0428
13403 % U+0429 CYRILLIC CAPITAL LETTER SHCHA; Shchacyrillic, *afii10043
13404 \DeclareTextCommand{\CYRSHCH}{PU}{\84\051}% U+0429
13405 % U+042A CYRILLIC CAPITAL LETTER HARD SIGN; Hardsigncyrillic, *afii10044
13406 \DeclareTextCommand{\CYRHRDSN}{PU}{\84\052}% U+042A
13407 % U+042B CYRILLIC CAPITAL LETTER YERU; Yericyrillic, *afii10045

13408 \DeclareTextCommand{\CYRERY}{PU}{\84\053}% U+042B
13409 % U+042C CYRILLIC CAPITAL LETTER SOFT SIGN; Softsigncyrillic, *afii10046
13410 \DeclareTextCommand{\CYRSFTSN}{PU}{\84\054}% U+042C
13411 % U+042D CYRILLIC CAPITAL LETTER E; Ereversedcyrillic, *afii10047
13412 \DeclareTextCommand{\CYREREV}{PU}{\84\055}% U+042D
13413 % U+042E CYRILLIC CAPITAL LETTER YU; IUcyrillic, *afii10048
13414 \DeclareTextCommand{\CYRYU}{PU}{\84\056}% U+042E
13415 % U+042F CYRILLIC CAPITAL LETTER YA; IAcyrillic, *afii10049
13416 \DeclareTextCommand{\CYRYA}{PU}{\84\057}% U+042F
13417 % U+0430 CYRILLIC SMALL LETTER A; acyrillic, *afii10065
13418 \DeclareTextCommand{\cyra}{PU}{\84\060}% U+0430
13419 % U+0431 CYRILLIC SMALL LETTER BE; *afii10066, becyrillic
13420 \DeclareTextCommand{\cyrb}{PU}{\84\061}% U+0431
13421 % U+0432 CYRILLIC SMALL LETTER VE; *afii10067, vecyrillic
13422 \DeclareTextCommand{\cyrv}{PU}{\84\062}% U+0432
13423 % U+0433 CYRILLIC SMALL LETTER GHE; *afii10068, gecyrillic
13424 \DeclareTextCommand{\cyrg}{PU}{\84\063}% U+0433
13425 % U+0434 CYRILLIC SMALL LETTER DE; *afii10069, decyrillic
13426 \DeclareTextCommand{\cyrd}{PU}{\84\064}% U+0434
13427 % U+0435 CYRILLIC SMALL LETTER IE; *afii10070, iecyrillic
13428 \DeclareTextCommand{\cyre}{PU}{\84\065}% U+0435
13429 % U+0436 CYRILLIC SMALL LETTER ZHE; *afii10072, zhecyrillic
13430 \DeclareTextCommand{\cyrz}{PU}{\84\066}% U+0436
13431 % U+0437 CYRILLIC SMALL LETTER ZE; *afii10073, zecyrillic
13432 \DeclareTextCommand{\cyrz}{PU}{\84\067}% U+0437
13433 % U+0438 CYRILLIC SMALL LETTER I; *afii10074, iicyrillic
13434 \DeclareTextCommand{\cyri}{PU}{\84\070}% U+0438
13435 % U+0439 CYRILLIC SMALL LETTER SHORT I; *afii10075, iishortcyrillic
13436 \DeclareTextCommand{\cyrishrt}{PU}{\84\071}% U+0439
13437 \DeclareTextCompositeCommand{\U}{PU}{\cyri}{\84\071}% U+0439
13438 % U+043A CYRILLIC SMALL LETTER KA; *afii10076, kacyrillic
13439 \DeclareTextCommand{\cyrk}{PU}{\84\072}% U+043A
13440 % U+043B CYRILLIC SMALL LETTER EL; *afii10077, elcyrillic
13441 \DeclareTextCommand{\cyrl}{PU}{\84\073}% U+043B
13442 % U+043C CYRILLIC SMALL LETTER EM; *afii10078, emcyrillic
13443 \DeclareTextCommand{\cyrm}{PU}{\84\074}% U+043C
13444 % U+043D CYRILLIC SMALL LETTER EN; *afii10079, encyrillic
13445 \DeclareTextCommand{\cyrn}{PU}{\84\075}% U+043D
13446 % U+043E CYRILLIC SMALL LETTER O; *afii10080, ocyrillic
13447 \DeclareTextCommand{\cyro}{PU}{\84\076}% U+043E
13448 % U+043F CYRILLIC SMALL LETTER PE; *afii10081, pecyrillic
13449 \DeclareTextCommand{\cyrp}{PU}{\84\077}% U+043F
13450 % U+0440 CYRILLIC SMALL LETTER ER; *afii10082, ercyrillic
13451 \DeclareTextCommand{\cyrr}{PU}{\84\100}% U+0440
13452 % U+0441 CYRILLIC SMALL LETTER ES; *afii10083, escyrillic
13453 \DeclareTextCommand{\cyrs}{PU}{\84\101}% U+0441
13454 % U+0442 CYRILLIC SMALL LETTER TE; *afii10084, tecyrillic
13455 \DeclareTextCommand{\cyrt}{PU}{\84\102}% U+0442
13456 % U+0443 CYRILLIC SMALL LETTER U; *afii10085, ucyrillic
13457 \DeclareTextCommand{\cyru}{PU}{\84\103}% U+0443
13458 % U+0444 CYRILLIC SMALL LETTER EF; *afii10086, efcyrillic
13459 \DeclareTextCommand{\cyrf}{PU}{\84\104}% U+0444
13460 % U+0445 CYRILLIC SMALL LETTER HA; *afii10087, khacyrillic
13461 \DeclareTextCommand{\cyrh}{PU}{\84\105}% U+0445
13462 % U+0446 CYRILLIC SMALL LETTER TSE; *afii10088, tsecyrillic
13463 \DeclareTextCommand{\cyrc}{PU}{\84\106}% U+0446
13464 % U+0447 CYRILLIC SMALL LETTER CHE; *afii10089, checyrillic

13465 \DeclareTextCommand{\cyrch}{PU}{\84\107}% U+0447
13466 % U+0448 CYRILLIC SMALL LETTER SHA; *afii10090, shacyrillic
13467 \DeclareTextCommand{\cyrsh}{PU}{\84\110}% U+0448
13468 % U+0449 CYRILLIC SMALL LETTER SHCHA; *afii10091, shchacyrillic
13469 \DeclareTextCommand{\cyrshch}{PU}{\84\111}% U+0449
13470 % U+044A CYRILLIC SMALL LETTER HARD SIGN; *afii10092, hardsigncyrillic
13471 \DeclareTextCommand{\cyrhrdsn}{PU}{\84\112}% U+044A
13472 % U+044B CYRILLIC SMALL LETTER YERU; *afii10093, yericyrillic
13473 \DeclareTextCommand{\cyrery}{PU}{\84\113}% U+044B
13474 % U+044C CYRILLIC SMALL LETTER SOFT SIGN; *afii10094, softsigncyrillic
13475 \DeclareTextCommand{\cyrsoftsn}{PU}{\84\114}% U+044C
13476 % U+044D CYRILLIC SMALL LETTER E; *afii10095, ereversedcyrillic
13477 \DeclareTextCommand{\cyrerev}{PU}{\84\115}% U+044D
13478 % U+044E CYRILLIC SMALL LETTER YU; *afii10096, iucyrillic
13479 \DeclareTextCommand{\cyrYu}{PU}{\84\116}% U+044E
13480 % U+044F CYRILLIC SMALL LETTER YA; *afii10097, iacyrillic
13481 \DeclareTextCommand{\cyrYa}{PU}{\84\117}% U+044F
13482 % U+0450 CYRILLIC SMALL LETTER IE WITH GRAVE
13483 \DeclareTextCompositeCommand{\'}{PU}{\cyre}{\84\120}% U+0450
13484 % U+0451 CYRILLIC SMALL LETTER IO; *afii10071, iocyrillic
13485 \DeclareTextCommand{\cyrIo}{PU}{\84\121}% U+0451
13486 \DeclareTextCompositeCommand{\"}{PU}{\cyre}{\84\121}% U+0451
13487 % U+0452 CYRILLIC SMALL LETTER DJE; *afii10099, djecyrillic
13488 \DeclareTextCommand{\cyrdje}{PU}{\84\122}% U+0452
13489 % U+0453 CYRILLIC SMALL LETTER GJE; *afii10100, gjecyrillic
13490 \DeclareTextCompositeCommand{\'}{PU}{\cyrg}{\84\123}% U+0453
13491 % U+0454 CYRILLIC SMALL LETTER UKRAINIAN IE; *afii10101, ecyrillic
13492 \DeclareTextCommand{\cyrie}{PU}{\84\124}% U+0454
13493 % U+0455 CYRILLIC SMALL LETTER DZE; *afii10102, dzecyrillic
13494 \DeclareTextCommand{\cyrdze}{PU}{\84\125}% U+0455
13495 % U+0456 CYRILLIC SMALL LETTER BYELORUSSIAN-UKRAINIAN I; *afii10103, icyrillic
13496 \DeclareTextCommand{\cyrii}{PU}{\84\126}% U+0456
13497 % U+0457 CYRILLIC SMALL LETTER YI; *afii10104, yicyrillic
13498 \DeclareTextCommand{\cyryi}{PU}{\84\127}% U+0457
13499 \DeclareTextCompositeCommand{\"}{PU}{\cyrii}{\84\127}% U+0457
13500 % U+0458 CYRILLIC SMALL LETTER JE; *afii10105, jecyrillic
13501 \DeclareTextCommand{\cyrje}{PU}{\84\130}% U+0458
13502 % U+0459 CYRILLIC SMALL LETTER LJE; *afii10106, ljecyrillic
13503 \DeclareTextCommand{\cyrLje}{PU}{\84\131}% U+0459
13504 % U+045A CYRILLIC SMALL LETTER NJE; *afii10107, njecyrillic
13505 \DeclareTextCommand{\cyrnje}{PU}{\84\132}% U+045A
13506 % U+045B CYRILLIC SMALL LETTER TSHE; *afii10108, tshecyrillic
13507 \DeclareTextCommand{\cyrtshe}{PU}{\84\133}% U+045B
13508 % U+045C CYRILLIC SMALL LETTER KJE; *afii10109, kjecyrillic
13509 \DeclareTextCompositeCommand{\'}{PU}{\cyrk}{\84\134}% U+045C
13510 % U+045D CYRILLIC SMALL LETTER I WITH GRAVE
13511 \DeclareTextCompositeCommand{\'}{PU}{\cyri}{\84\135}% U+045D
13512 % U+045E CYRILLIC SMALL LETTER SHORT U; *afii10110, ushortcyrillic
13513 \DeclareTextCommand{\cyrushrt}{PU}{\84\136}% U+045E
13514 \DeclareTextCompositeCommand{\U}{PU}{\curu}{\84\136}% U+045E
13515 % U+045F CYRILLIC SMALL LETTER DZHE; *afii10193, dzhecyrillic
13516 \DeclareTextCommand{\cyrdzhe}{PU}{\84\137}% U+045F
13517 % U+0460 CYRILLIC CAPITAL LETTER OMEGA; Omegacyrillic
13518 \DeclareTextCommand{\CYROMEGA}{PU}{\84\140}% U+0460
13519 % U+0461 CYRILLIC SMALL LETTER OMEGA; omegacyrillic
13520 \DeclareTextCommand{\cyromega}{PU}{\84\141}% U+0461
13521 % U+0462 CYRILLIC CAPITAL LETTER YAT; Yatcyrillic, *afii10146

13522 \DeclareTextCommand{\CYRYAT}{PU}{\84\142}% U+0462
13523 % U+0463 CYRILLIC SMALL LETTER YAT; *afii10194, yatcyrillic
13524 \DeclareTextCommand{\cyryat}{PU}{\84\143}% U+0463
13525 % U+0464 CYRILLIC CAPITAL LETTER IOTIFIED E; Eiotifiedcyrillic
13526 \DeclareTextCommand{\CYRIOTE}{PU}{\84\144}% U+0464
13527 % U+0465 CYRILLIC SMALL LETTER IOTIFIED E; eiotifiedcyrillic
13528 \DeclareTextCommand{\cyriote}{PU}{\84\145}% U+0465
13529 % U+0466 CYRILLIC CAPITAL LETTER LITTLE YUS; Yuslittlecyrillic
13530 \DeclareTextCommand{\CYRLYUS}{PU}{\84\146}% U+0466
13531 % U+0467 CYRILLIC SMALL LETTER LITTLE YUS; yuslittlecyrillic
13532 \DeclareTextCommand{\cyrlyus}{PU}{\84\147}% U+0467
13533 % U+0468 CYRILLIC CAPITAL LETTER IOTIFIED LITTLE YUS; Yuslitleiotifiedcyrillic
13534 \DeclareTextCommand{\CYRIOTLYUS}{PU}{\84\150}% U+0468
13535 % U+0469 CYRILLIC SMALL LETTER IOTIFIED LITTLE YUS; yuslitleiotifiedcyrillic
13536 \DeclareTextCommand{\cyriotlyus}{PU}{\84\151}% U+0469
13537 % U+046A CYRILLIC CAPITAL LETTER BIG YUS; Yusbigcyrillic
13538 \DeclareTextCommand{\CYRBYUS}{PU}{\84\152}% U+046A
13539 % U+046B CYRILLIC SMALL LETTER BIG YUS; yusbigcyrillic
13540 \DeclareTextCommand{\cyrbyus}{PU}{\84\153}% U+046B
13541 % U+046C CYRILLIC CAPITAL LETTER IOTIFIED BIG YUS; Yusbigiotifiedcyrillic
13542 \DeclareTextCommand{\CYRIOTBYUS}{PU}{\84\154}% U+046C
13543 % U+046D CYRILLIC SMALL LETTER IOTIFIED BIG YUS; yusbigiotifiedcyrillic
13544 \DeclareTextCommand{\cyriotbyus}{PU}{\84\155}% U+046D
13545 % U+046E CYRILLIC CAPITAL LETTER KSI; Ksicyrillic
13546 \DeclareTextCommand{\CYRKSI}{PU}{\84\156}% U+046E
13547 % U+046F CYRILLIC SMALL LETTER KSI; ksicyrillic
13548 \DeclareTextCommand{\cyrksi}{PU}{\84\157}% U+046F
13549 % U+0470 CYRILLIC CAPITAL LETTER PSI; Psicyrillic
13550 \DeclareTextCommand{\CYRPSI}{PU}{\84\160}% U+0470
13551 % U+0471 CYRILLIC SMALL LETTER PSI; psicyrillic
13552 \DeclareTextCommand{\cyrpsi}{PU}{\84\161}% U+0471
13553 % U+0472 CYRILLIC CAPITAL LETTER FITA; Fitacyrillic, *afii10147
13554 \DeclareTextCommand{\CYRFITA}{PU}{\84\162}% U+0472
13555 % U+0473 CYRILLIC SMALL LETTER FITA; *afii10195, fitacyrillic
13556 \DeclareTextCommand{\cyrfita}{PU}{\84\163}% U+0473
13557 % U+0474 CYRILLIC CAPITAL LETTER IZHITSA; Izhitsacyrillic, *afii10148
13558 \DeclareTextCommand{\CYRIZH}{PU}{\84\164}% U+0474
13559 % U+0475 CYRILLIC SMALL LETTER IZHITSA; *afii10196, izhitsacyrillic
13560 \DeclareTextCommand{\cyrizh}{PU}{\84\165}% U+0475
13561 % U+0476 CYRILLIC CAPITAL LETTER IZHITSA WITH DOUBLE GRAVE ACCENT; Izhitsadblgravecyrillic
13562 \DeclareTextCompositeCommand{\C}{PU}{\CYRIZH}{\84\166}% U+0476
13563 % U+0477 CYRILLIC SMALL LETTER IZHITSA WITH DOUBLE GRAVE ACCENT; izhitsadblgravecyrillic
13564 \DeclareTextCompositeCommand{\C}{PU}{\cyrizh}{\84\167}% U+0477
13565 % U+0478 CYRILLIC CAPITAL LETTER UK; Ukcyrillic
13566 \DeclareTextCommand{\CYRUK}{PU}{\84\170}% U+0478
13567 % U+0479 CYRILLIC SMALL LETTER UK; ukcyrillic
13568 \DeclareTextCommand{\cyruk}{PU}{\84\171}% U+0479
13569 % U+047A CYRILLIC CAPITAL LETTER ROUND OMEGA; Omegaroundcyrillic
13570 \DeclareTextCommand{\CYROMEGARND}{PU}{\84\172}% U+047A
13571 % U+047B CYRILLIC SMALL LETTER ROUND OMEGA; omegaroundcyrillic
13572 \DeclareTextCommand{\cyromegarnd}{PU}{\84\173}% U+047B
13573 % U+047C CYRILLIC CAPITAL LETTER OMEGA WITH TITLO; Omegatitlocyrillic
13574 \DeclareTextCommand{\CYROMEGATITLO}{PU}{\84\174}% U+047C
13575 % U+047D CYRILLIC SMALL LETTER OMEGA WITH TITLO; omegatitlocyrillic
13576 \DeclareTextCommand{\cyromegatitlo}{PU}{\84\175}% U+047D
13577 % U+047E CYRILLIC CAPITAL LETTER OT; Otcyrillic
13578 \DeclareTextCommand{\CYROT}{PU}{\84\176}% U+047E

13579 % U+047F CYRILLIC SMALL LETTER OT; otcyrillic
 13580 \DeclareTextCommand{\cyrot}{PU}{\84\177}% U+047F
 13581 % U+0480 CYRILLIC CAPITAL LETTER KOPPA; Koppacyrillic
 13582 \DeclareTextCommand{\CYRKOPPA}{PU}{\84\200}% U+0480
 13583 % U+0481 CYRILLIC SMALL LETTER KOPPA; koppacyrillic
 13584 \DeclareTextCommand{\cyrkoppa}{PU}{\84\201}% U+0481
 13585 % U+0482 CYRILLIC THOUSANDS SIGN; thousandcyrillic
 13586 \DeclareTextCommand{\cyrthousands}{PU}{\84\202}% U+0482
 \84\203: U+0483 COMBINING CYRILLIC TITLO; titlocyrilliccmb
 \84\204: U+0484 COMBINING CYRILLIC PALATALIZATION; palatalizationcyrilliccmb
 \84\205: U+0485 COMBINING CYRILLIC DASIA PNEUMATA; dasiapneumatacyrilliccmb
 \84\206: U+0486 COMBINING CYRILLIC PSILI PNEUMATA; psilipneumatacyrilliccmb
 \84\207: U+0487 COMBINING CYRILLIC POKRYTIE
 \84\210: U+0488 COMBINING CYRILLIC HUNDRED THOUSANDS SIGN
 \84\211: U+0489 COMBINING CYRILLIC MILLIONS SIGN
 13587 % U+048A CYRILLIC CAPITAL LETTER SHORT I WITH TAIL
 13588 \DeclareTextCommand{\CYRISHRTDSC}{PU}{\84\212}% U+048A
 13589 % U+048B CYRILLIC SMALL LETTER SHORT I WITH TAIL
 13590 \DeclareTextCommand{\cyrishrtdsc}{PU}{\84\213}% U+048B
 13591 % U+048C CYRILLIC CAPITAL LETTER SEMISOFT SIGN
 13592 \DeclareTextCommand{\CYRSEMISFTSN}{PU}{\84\214}% U+048C
 13593 % U+048D CYRILLIC SMALL LETTER SEMISOFT SIGN
 13594 \DeclareTextCommand{\cyrsemisftsn}{PU}{\84\215}% U+048D
 13595 % U+048E CYRILLIC CAPITAL LETTER ER WITH TICK
 13596 \DeclareTextCommand{\CYRRTICK}{PU}{\84\216}% U+048E
 13597 % U+048F CYRILLIC SMALL LETTER ER WITH TICK
 13598 \DeclareTextCommand{\cyrrtick}{PU}{\84\217}% U+048F
 13599 % U+0490 CYRILLIC CAPITAL LETTER GHE WITH UPTURN; Gheupturncyrillic, *afii10050
 13600 \DeclareTextCommand{\CYRGUP}{PU}{\84\220}% U+0490
 13601 % U+0491 CYRILLIC SMALL LETTER GHE WITH UPTURN; *afii10098, gheupturncyrillic
 13602 \DeclareTextCommand{\cyrgup}{PU}{\84\221}% U+0491
 13603 % U+0492 CYRILLIC CAPITAL LETTER GHE WITH STROKE; Ghestrokecyrillic
 13604 \DeclareTextCommand{\CYRGHCRS}{PU}{\84\222}% U+0492
 13605 % U+0493 CYRILLIC SMALL LETTER GHE WITH STROKE; ghestrokecyrillic
 13606 \DeclareTextCommand{\cyrghcrs}{PU}{\84\223}% U+0493
 13607 % U+0494 CYRILLIC CAPITAL LETTER GHE WITH MIDDLE HOOK; Ghemiddlehookcyrillic
 13608 \DeclareTextCommand{\CYRGHK}{PU}{\84\224}% U+0494
 13609 % U+0495 CYRILLIC SMALL LETTER GHE WITH MIDDLE HOOK; ghemiddlehookcyrillic
 13610 \DeclareTextCommand{\cyrghk}{PU}{\84\225}% U+0495
 13611 % U+0496 CYRILLIC CAPITAL LETTER ZHE WITH DESCENDER; Zhedescendercyrillic
 13612 \DeclareTextCommand{\CYRZHDSC}{PU}{\84\226}% U+0496
 13613 % U+0497 CYRILLIC SMALL LETTER ZHE WITH DESCENDER; zhedescendercyrillic
 13614 \DeclareTextCommand{\cyrzhdsc}{PU}{\84\227}% U+0497
 13615 % U+0498 CYRILLIC CAPITAL LETTER ZE WITH DESCENDER; Zedescendercyrillic
 13616 \DeclareTextCommand{\CYRZDSC}{PU}{\84\230}% U+0498
 13617 \DeclareTextCompositeCommand{\c}{PU}{\CYRZ}{\84\230}% U+0498
 13618 % U+0499 CYRILLIC SMALL LETTER ZE WITH DESCENDER; zedescendercyrillic
 13619 \DeclareTextCommand{\cyrzds}{PU}{\84\231}% U+0499
 13620 \DeclareTextCompositeCommand{\c}{PU}{\cyrz}{\84\231}% U+0499
 13621 % U+049A CYRILLIC CAPITAL LETTER KA WITH DESCENDER; Kadescendercyrillic
 13622 \DeclareTextCommand{\CYRKDSC}{PU}{\84\232}% U+049A
 13623 % U+049B CYRILLIC SMALL LETTER KA WITH DESCENDER; kadescendercyrillic
 13624 \DeclareTextCommand{\cyrkdsc}{PU}{\84\233}% U+049B

13625 % U+049C CYRILLIC CAPITAL LETTER KA WITH VERTICAL STROKE; Kaverticalstrokecyrillic
 13626 \DeclareTextCommand{\CYRKVCRS}{PU}{\84\234}% U+049C
 13627 % U+049D CYRILLIC SMALL LETTER KA WITH VERTICAL STROKE; kaverticalstrokecyrillic
 13628 \DeclareTextCommand{\cyrkvcrs}{PU}{\84\235}% U+049D
 13629 % U+049E CYRILLIC CAPITAL LETTER KA WITH STROKE; Kastrokecyrillic
 13630 \DeclareTextCommand{\CYRKHC RS}{PU}{\84\236}% U+049E
 13631 % U+049F CYRILLIC SMALL LETTER KA WITH STROKE; kastrokecyrillic
 13632 \DeclareTextCommand{\cyrkhc rs}{PU}{\84\237}% U+049F
 13633 % U+04A0 CYRILLIC CAPITAL LETTER BASHKIR KA; Kabashkircyrillic
 13634 \DeclareTextCommand{\CYRKBEAK}{PU}{\84\240}% U+04A0
 13635 % U+04A1 CYRILLIC SMALL LETTER BASHKIR KA; kabashkircyrillic
 13636 \DeclareTextCommand{\cyrkbeak}{PU}{\84\241}% U+04A1
 13637 % U+04A2 CYRILLIC CAPITAL LETTER EN WITH DESCENDER; Endescendercyrillic
 13638 \DeclareTextCommand{\CYRNDSC}{PU}{\84\242}% U+04A2
 13639 % U+04A3 CYRILLIC SMALL LETTER EN WITH DESCENDER; endescendercyrillic
 13640 \DeclareTextCommand{\cyrndsc}{PU}{\84\243}% U+04A3
 13641 % U+04A4 CYRILLIC CAPITAL LIGATURE EN GHE; Enghecyrillic
 13642 \DeclareTextCommand{\CYRNG}{PU}{\84\244}% U+04A4
 13643 % U+04A5 CYRILLIC SMALL LIGATURE EN GHE; enghecyrillic
 13644 \DeclareTextCommand{\cyrng}{PU}{\84\245}% U+04A5
 13645 % U+04A6 CYRILLIC CAPITAL LETTER PE WITH MIDDLE HOOK; Pemiddlehookcyrillic
 13646 \DeclareTextCommand{\CYRPHK}{PU}{\84\246}% U+04A6
 13647 % U+04A7 CYRILLIC SMALL LETTER PE WITH MIDDLE HOOK; pemiddlehookcyrillic
 13648 \DeclareTextCommand{\cyrphk}{PU}{\84\247}% U+04A7
 13649 % U+04A8 CYRILLIC CAPITAL LETTER ABKHASIAN HA; Haabkhasiancyrillic
 13650 \DeclareTextCommand{\CYRABHHA}{PU}{\84\250}% U+04A8
 13651 % U+04A9 CYRILLIC SMALL LETTER ABKHASIAN HA; haabkhasiancyrillic
 13652 \DeclareTextCommand{\cyrabhha}{PU}{\84\251}% U+04A9
 13653 % U+04AA CYRILLIC CAPITAL LETTER ES WITH DESCENDER; Esdescendercyrillic
 13654 \DeclareTextCommand{\CYRSDSC}{PU}{\84\252}% U+04AA
 13655 \DeclareTextCompositeCommand{\CYRSDSC}{PU}{\CYRS}{\84\252}% U+04AA
 13656 % U+04AB CYRILLIC SMALL LETTER ES WITH DESCENDER; esdescendercyrillic
 13657 \DeclareTextCommand{\cyrsdsc}{PU}{\84\253}% U+04AB
 13658 \DeclareTextCompositeCommand{\k}{PU}{\cyrs}{\84\253}% U+04AB
 13659 % U+04AC CYRILLIC CAPITAL LETTER TE WITH DESCENDER; Tedescendercyrillic
 13660 \DeclareTextCommand{\CYRTDSC}{PU}{\84\254}% U+04AC
 13661 % U+04AD CYRILLIC SMALL LETTER TE WITH DESCENDER; tedescendercyrillic
 13662 \DeclareTextCommand{\cyrt dsc}{PU}{\84\255}% U+04AD
 13663 % U+04AE CYRILLIC CAPITAL LETTER STRAIGHT U; Ustraightcyrillic
 13664 \DeclareTextCommand{\CYRY}{PU}{\84\256}% U+04AE
 13665 % U+04AF CYRILLIC SMALL LETTER STRAIGHT U; ustraightcyrillic
 13666 \DeclareTextCommand{\cyry}{PU}{\84\257}% U+04AF
 13667 % U+04B0 CYRILLIC CAPITAL LETTER STRAIGHT U WITH STROKE; Ustraightstrokecyrillic
 13668 \DeclareTextCommand{\CYRYHCRS}{PU}{\84\260}% U+04B0
 13669 % U+04B1 CYRILLIC SMALL LETTER STRAIGHT U WITH STROKE; ustraightstrokecyrillic
 13670 \DeclareTextCommand{\cyryhc rs}{PU}{\84\261}% U+04B1
 13671 % U+04B2 CYRILLIC CAPITAL LETTER HA WITH DESCENDER; Hadescendercyrillic
 13672 \DeclareTextCommand{\CYRHDSC}{PU}{\84\262}% U+04B2
 13673 % U+04B3 CYRILLIC SMALL LETTER HA WITH DESCENDER; hadescendercyrillic
 13674 \DeclareTextCommand{\cyrh dsc}{PU}{\84\263}% U+04B3
 13675 % U+04B4 CYRILLIC CAPITAL LIGATURE TE TSE; Tetsecyrillic
 13676 \DeclareTextCommand{\CYRTETSE}{PU}{\84\264}% U+04B4
 13677 % U+04B5 CYRILLIC SMALL LIGATURE TE TSE; tetsecyrillic
 13678 \DeclareTextCommand{\cyrtetse}{PU}{\84\265}% U+04B5
 13679 % U+04B6 CYRILLIC CAPITAL LETTER CHE WITH DESCENDER; Chedescendercyrillic
 13680 \DeclareTextCommand{\CYRCHRDSC}{PU}{\84\266}% U+04B6
 13681 % U+04B7 CYRILLIC SMALL LETTER CHE WITH DESCENDER; chedescendercyrillic

13682 \DeclareTextCommand{\cyrchrdsc}{PU}{\84\267}% U+04B7
13683 % U+04B8 CYRILLIC CAPITAL LETTER CHE WITH VERTICAL STROKE; Cheverticalstrokecyrillic
13684 \DeclareTextCommand{\CYRCHVCRS}{PU}{\84\270}% U+04B8
13685 % U+04B9 CYRILLIC SMALL LETTER CHE WITH VERTICAL STROKE; cheverticalstrokecyrillic
13686 \DeclareTextCommand{\cyrchvcrs}{PU}{\84\271}% U+04B9
13687 % U+04BA CYRILLIC CAPITAL LETTER SHHA; Shhacyrillic
13688 \DeclareTextCommand{\CYRSHHA}{PU}{\84\272}% U+04BA
13689 % U+04BB CYRILLIC SMALL LETTER SHHA; shhacyrillic
13690 \DeclareTextCommand{\cyrshha}{PU}{\84\273}% U+04BB
13691 % U+04BC CYRILLIC CAPITAL LETTER ABKHASIAN CHE; Cheabkhasiancyrillic
13692 \DeclareTextCommand{\CYRABHCH}{PU}{\84\274}% U+04BC
13693 % U+04BD CYRILLIC SMALL LETTER ABKHASIAN CHE; cheabkhasiancyrillic
13694 \DeclareTextCommand{\cyrabhch}{PU}{\84\275}% U+04BD
13695 % U+04BE CYRILLIC CAPITAL LETTER ABKHASIAN CHE WITH DESCENDER; Chedescenderabkhasiancyrillic
13696 \DeclareTextCommand{\CYRABHCHDSC}{PU}{\84\276}% U+04BE
13697 \DeclareTextCompositeCommand{\k}{PU}{\CYRABHCH}{\84\276}% U+04BE
13698 % U+04BF CYRILLIC SMALL LETTER ABKHASIAN CHE WITH DESCENDER; chedescenderabkhasiancyrillic
13699 \DeclareTextCommand{\cyrabhchdsc}{PU}{\84\277}% U+04BF
13700 \DeclareTextCompositeCommand{\k}{PU}{\cyrabhch}{\84\277}% U+04BF
13701 % U+04C0 CYRILLIC LETTER PALOCHKA; palochkacyrillic
13702 \DeclareTextCommand{\CYRpalochka}{PU}{\84\300}% U+04C0
13703 % U+04C1 CYRILLIC CAPITAL LETTER ZHE WITH BREVE; Zhebrevecyrillic
13704 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\301}% U+04C1
13705 % U+04C2 CYRILLIC SMALL LETTER ZHE WITH BREVE; zhebrevecyrillic
13706 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\302}% U+04C2
13707 % U+04C3 CYRILLIC CAPITAL LETTER KA WITH HOOK; Kahookcyrillic
13708 \DeclareTextCommand{\CYRKHK}{PU}{\84\303}% U+04C3
13709 % U+04C4 CYRILLIC SMALL LETTER KA WITH HOOK; kahookcyrillic
13710 \DeclareTextCommand{\cyrkhk}{PU}{\84\304}% U+04C4
13711 % U+04C5 CYRILLIC CAPITAL LETTER EL WITH TAIL
13712 \DeclareTextCommand{\CYRLDSC}{PU}{\84\305}% U+04C5
13713 % U+04C6 CYRILLIC SMALL LETTER EL WITH TAIL
13714 \DeclareTextCommand{\cyrlldsc}{PU}{\84\306}% U+04C6
13715 % U+04C7 CYRILLIC CAPITAL LETTER EN WITH HOOK; Enhookcyrillic
13716 \DeclareTextCommand{\CYRNHK}{PU}{\84\307}% U+04C7
13717 % U+04C8 CYRILLIC SMALL LETTER EN WITH HOOK; enhookcyrillic
13718 \DeclareTextCommand{\cyrnhk}{PU}{\84\310}% U+04C8
13719 % U+04CB CYRILLIC CAPITAL LETTER KHAKASSIAN CHE; Chekhakassiancyrillic
13720 \DeclareTextCommand{\CYRCHLDSC}{PU}{\84\313}% U+04CB
13721 % U+04CC CYRILLIC SMALL LETTER KHAKASSIAN CHE; chekhakassiancyrillic
13722 \DeclareTextCommand{\cyrchldsc}{PU}{\84\314}% U+04CC
13723 % U+04CD CYRILLIC CAPITAL LETTER EM WITH TAIL
13724 \DeclareTextCommand{\CYRMDSC}{PU}{\84\315}% U+04CD
13725 % U+04CE CYRILLIC SMALL LETTER EM WITH TAIL
13726 \DeclareTextCommand{\cyrmldsc}{PU}{\84\316}% U+04CE
\84\317: U+04CF CYRILLIC SMALL LETTER PALOCHKA
13727 % U+04D0 CYRILLIC CAPITAL LETTER A WITH BREVE; Abrevecyrillic
13728 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\320}% U+04D0
13729 % U+04D1 CYRILLIC SMALL LETTER A WITH BREVE; abrevecyrillic
13730 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\321}% U+04D1
13731 % U+04D2 CYRILLIC CAPITAL LETTER A WITH DIAERESIS; Adieresiscyrillic
13732 \DeclareTextCompositeCommand{"}{PU}{\CYRA}{\84\322}% U+04D2
13733 % U+04D3 CYRILLIC SMALL LETTER A WITH DIAERESIS; adieresiscyrillic
13734 \DeclareTextCompositeCommand{"}{PU}{\cyra}{\84\323}% U+04D3
13735 % U+04D4 CYRILLIC CAPITAL LIGATURE A IE; Aiecyrillic
13736 \DeclareTextCommand{\CYRAE}{PU}{\84\324}% U+04D4
13737 % U+04D5 CYRILLIC SMALL LIGATURE A IE; aiecyrillic

13738 \DeclareTextCommand{\cyrae}{PU}{\84\325}% U+04D5
13739 % U+04D6 CYRILLIC CAPITAL LETTER IE WITH BREVE; Iebrevacyrillic
13740 \DeclareTextCompositeCommand{\U}{PU}{\CYRE}{\84\326}% U+04D6
13741 % U+04D7 CYRILLIC SMALL LETTER IE WITH BREVE; iebrevacyrillic
13742 \DeclareTextCompositeCommand{\U}{PU}{\cyre}{\84\327}% U+04D7
13743 % U+04D8 CYRILLIC CAPITAL LETTER SCHWA; Schwacyrillic
13744 \DeclareTextCommand{\CYRSCHWA}{PU}{\84\330}% U+04D8
13745 % U+04D9 CYRILLIC SMALL LETTER SCHWA; *afii10846, schwacyrillic
13746 \DeclareTextCommand{\cyrschwa}{PU}{\84\331}% U+04D9
13747 % U+04DA CYRILLIC CAPITAL LETTER SCHWA WITH DIAERESIS; Schwadieresiscyrillic
13748 \DeclareTextCompositeCommand{\"}{PU}{\CYRSCHWA}{\84\332}% U+04DA
13749 % U+04DB CYRILLIC SMALL LETTER SCHWA WITH DIAERESIS; schwadieresiscyrillic
13750 \DeclareTextCompositeCommand{\"}{PU}{\cyrschwa}{\84\333}% U+04DB
13751 % U+04DC CYRILLIC CAPITAL LETTER ZHE WITH DIAERESIS; Zhedieresiscyrillic
13752 \DeclareTextCompositeCommand{\"}{PU}{\CYRZH}{\84\334}% U+04DC
13753 % U+04DD CYRILLIC SMALL LETTER ZHE WITH DIAERESIS; zhedieresiscyrillic
13754 \DeclareTextCompositeCommand{\"}{PU}{\cyrzh}{\84\335}% U+04DD
13755 % U+04DE CYRILLIC CAPITAL LETTER ZE WITH DIAERESIS; Zedieresiscyrillic
13756 \DeclareTextCompositeCommand{\"}{PU}{\CYRZ}{\84\336}% U+04DE
13757 % U+04DF CYRILLIC SMALL LETTER ZE WITH DIAERESIS; zedieresiscyrillic
13758 \DeclareTextCompositeCommand{\"}{PU}{\cyrz}{\84\337}% U+04DF
13759 % U+04E0 CYRILLIC CAPITAL LETTER ABKHASIAN DZE; Dzeabkhasiancyrillic
13760 \DeclareTextCommand{\CYRABHDZE}{PU}{\84\340}% U+04E0
13761 % U+04E1 CYRILLIC SMALL LETTER ABKHASIAN DZE; dzeabkhasiancyrillic
13762 \DeclareTextCommand{\cyrabhdze}{PU}{\84\341}% U+04E1
13763 % U+04E2 CYRILLIC CAPITAL LETTER I WITH MACRON; Imacroncyrillic
13764 \DeclareTextCompositeCommand{\=}{PU}{\CYRI}{\84\342}% U+04E2
13765 % U+04E3 CYRILLIC SMALL LETTER I WITH MACRON; imacroncyrillic
13766 \DeclareTextCompositeCommand{\=}{PU}{\cyri}{\84\343}% U+04E3
13767 % U+04E4 CYRILLIC CAPITAL LETTER I WITH DIAERESIS; Idieresiscyrillic
13768 \DeclareTextCompositeCommand{\"}{PU}{\CYRI}{\84\344}% U+04E4
13769 % U+04E5 CYRILLIC SMALL LETTER I WITH DIAERESIS; idieresiscyrillic
13770 \DeclareTextCompositeCommand{\"}{PU}{\cyri}{\84\345}% U+04E5
13771 % U+04E6 CYRILLIC CAPITAL LETTER O WITH DIAERESIS; Odieresiscyrillic
13772 \DeclareTextCompositeCommand{\"}{PU}{\CYRO}{\84\346}% U+04E6
13773 % U+04E7 CYRILLIC SMALL LETTER O WITH DIAERESIS; odieresiscyrillic
13774 \DeclareTextCompositeCommand{\"}{PU}{\cyro}{\84\347}% U+04E7
13775 % U+04E8 CYRILLIC CAPITAL LETTER BARRED O; Obarredcyrillic
13776 \DeclareTextCommand{\CYROTLD}{PU}{\84\350}% U+04E8
13777 % U+04E9 CYRILLIC SMALL LETTER BARRED O; obarredcyrillic
13778 \DeclareTextCommand{\cyrotld}{PU}{\84\351}% U+04E9
13779 % U+04EA CYRILLIC CAPITAL LETTER BARRED O WITH DIAERESIS; Obarreddieresiscyrillic
13780 \DeclareTextCompositeCommand{\"}{PU}{\CYROTLD}{\84\352}% U+04EA
13781 % U+04EB CYRILLIC SMALL LETTER BARRED O WITH DIAERESIS; obarreddieresiscyrillic
13782 \DeclareTextCompositeCommand{\"}{PU}{\cyrotld}{\84\353}% U+04EB
13783 % U+04EC CYRILLIC CAPITAL LETTER E WITH DIAERESIS
13784 \DeclareTextCompositeCommand{\"}{PU}{\CYREREV}{\84\354}% U+04EC
13785 % U+04ED CYRILLIC SMALL LETTER E WITH DIAERESIS
13786 \DeclareTextCompositeCommand{\"}{PU}{\cyreref}{\84\355}% U+04ED
13787 % U+04EE CYRILLIC CAPITAL LETTER U WITH MACRON; Umacroncyrillic
13788 \DeclareTextCompositeCommand{\=}{PU}{\CYRU}{\84\356}% U+04EE
13789 % U+04EF CYRILLIC SMALL LETTER U WITH MACRON; umacroncyrillic
13790 \DeclareTextCompositeCommand{\=}{PU}{\cyru}{\84\357}% U+04EF
13791 % U+04F0 CYRILLIC CAPITAL LETTER U WITH DIAERESIS; Udieresiscyrillic
13792 \DeclareTextCompositeCommand{\"}{PU}{\CYRU}{\84\360}% U+04F0
13793 % U+04F1 CYRILLIC SMALL LETTER U WITH DIAERESIS; udieresiscyrillic
13794 \DeclareTextCompositeCommand{\"}{PU}{\cyru}{\84\361}% U+04F1

13795 % U+04F2 CYRILLIC CAPITAL LETTER U WITH DOUBLE ACUTE; Uhungarumlautcyrillic
 13796 \DeclareTextCompositeCommand{\H}{PU}{\CYRU}{\84\362}% U+04F2
 13797 % U+04F3 CYRILLIC SMALL LETTER U WITH DOUBLE ACUTE; uhungarumlautcyrillic
 13798 \DeclareTextCompositeCommand{\h}{PU}{\cyru}{\84\363}% U+04F3
 13799 % U+04F4 CYRILLIC CAPITAL LETTER CHE WITH DIAERESIS; Chedieresiscyrillic
 13800 \DeclareTextCompositeCommand{"}{PU}{\CYRCH}{\84\364}% U+04F4
 13801 % U+04F5 CYRILLIC SMALL LETTER CHE WITH DIAERESIS; chedieresiscyrillic
 13802 \DeclareTextCompositeCommand{"}{PU}{\cyrch}{\84\365}% U+04F5
 13803 % U+04F6 CYRILLIC CAPITAL LETTER GHE WITH DESCENDER
 13804 \DeclareTextCommand{\CYRGDSC}{PU}{\84\366}% U+04F6
 13805 % U+04F7 CYRILLIC SMALL LETTER GHE WITH DESCENDER
 13806 \DeclareTextCommand{\cyrgdsc}{PU}{\84\367}% U+04F7
 13807 % U+04F8 CYRILLIC CAPITAL LETTER YERU WITH DIAERESIS; Yerudieresiscyrillic
 13808 \DeclareTextCompositeCommand{"}{PU}{\CYRERY}{\84\370}% U+04F8
 13809 % U+04F9 CYRILLIC SMALL LETTER YERU WITH DIAERESIS; yerudieresiscyrillic
 13810 \DeclareTextCompositeCommand{"}{PU}{\cyrery}{\84\371}% U+04F9
 \84\372: U+04FA CYRILLIC CAPITAL LETTER GHE WITH STROKE AND HOOK
 \84\373: U+04FB CYRILLIC SMALL LETTER GHE WITH STROKE AND HOOK
 13811 % U+04FC CYRILLIC CAPITAL LETTER HA WITH HOOK
 13812 \DeclareTextCommand{\CYRHHK}{PU}{\84\374}% U+04FC
 13813 % U+04FD CYRILLIC SMALL LETTER HA WITH HOOK
 13814 \DeclareTextCommand{\cyrrhk}{PU}{\84\375}% U+04FD
 \84\376: U+04FE CYRILLIC CAPITAL LETTER HA WITH STROKE
 \84\377: U+04FF CYRILLIC SMALL LETTER HA WITH STROKE

50.2.10 Thai: U+0E00 to U+0E7F

13815 % U+0E3F THAI CURRENCY SYMBOL BAHT; bahtthai
 13816 \DeclareTextCommand{\textbaht}{PU}{\9016\077}% U+0E3F

50.2.11 Latin Extended Additional: U+1E00 to U+1EFF

13817 % U+1E02 LATIN CAPITAL LETTER B WITH DOT ABOVE; Bdotaccent
 13818 \DeclareTextCompositeCommand{\.}{PU}{B}{\9036\002}% U+1E02
 13819 % U+1E03 LATIN SMALL LETTER B WITH DOT ABOVE; bdotaccent
 13820 \DeclareTextCompositeCommand{\.}{PU}{b}{\9036\003}% U+1E03
 13821 % U+1E06 LATIN CAPITAL LETTER B WITH LINE BELOW; Blinebelow
 13822 \DeclareTextCompositeCommand{\b}{PU}{B}{\9036\006}% U+1E06
 13823 % U+1E07 LATIN SMALL LETTER B WITH LINE BELOW; blinebelow
 13824 \DeclareTextCompositeCommand{\b}{PU}{b}{\9036\007}% U+1E07
 13825 % U+1E0A LATIN CAPITAL LETTER D WITH DOT ABOVE; Ddotaccent
 13826 \DeclareTextCompositeCommand{\.}{PU}{D}{\9036\012}% U+1E0A
 13827 % U+1E0B LATIN SMALL LETTER D WITH DOT ABOVE; ddotaccent
 13828 \DeclareTextCompositeCommand{\.}{PU}{d}{\9036\013}% U+1E0B
 13829 % U+1E0E LATIN CAPITAL LETTER D WITH LINE BELOW; Dlinebelow
 13830 \DeclareTextCompositeCommand{\b}{PU}{D}{\9036\016}% U+1E0E
 13831 % U+1E0F LATIN SMALL LETTER D WITH LINE BELOW; dlinebelow
 13832 \DeclareTextCompositeCommand{\b}{PU}{d}{\9036\017}% U+1E0F
 13833 % U+1E10 LATIN CAPITAL LETTER D WITH CEDILLA; Dcedilla
 13834 \DeclareTextCompositeCommand{\c}{PU}{D}{\9036\020}% U+1E10
 13835 % U+1E11 LATIN SMALL LETTER D WITH CEDILLA; dcedilla
 13836 \DeclareTextCompositeCommand{\c}{PU}{d}{\9036\021}% U+1E11
 13837 % U+1E1E LATIN CAPITAL LETTER F WITH DOT ABOVE; Fdotaccent
 13838 \DeclareTextCompositeCommand{\.}{PU}{F}{\9036\036}% U+1E1E
 13839 % U+1E1F LATIN SMALL LETTER F WITH DOT ABOVE; fdotaccent
 13840 \DeclareTextCompositeCommand{\.}{PU}{f}{\9036\037}% U+1E1F
 13841 % U+1E20 LATIN CAPITAL LETTER G WITH MACRON; Gmacron

13842 \DeclareTextCompositeCommand{\=}{PU}{G}{\9036\040}% U+1E20
13843 % U+1E21 LATIN SMALL LETTER G WITH MACRON; gmacron
13844 \DeclareTextCompositeCommand{\=}{PU}{g}{\9036\041}% U+1E21
13845 % U+1E22 LATIN CAPITAL LETTER H WITH DOT ABOVE; Hdotaccent
13846 \DeclareTextCompositeCommand{\.}{PU}{H}{\9036\042}% U+1E22
13847 % U+1E23 LATIN SMALL LETTER H WITH DOT ABOVE; hdotaccent
13848 \DeclareTextCompositeCommand{\.}{PU}{h}{\9036\043}% U+1E23
13849 % U+1E26 LATIN CAPITAL LETTER H WITH DIAERESIS; Hdieresis
13850 \DeclareTextCompositeCommand{\"}{PU}{H}{\9036\046}% U+1E26
13851 % U+1E27 LATIN SMALL LETTER H WITH DIAERESIS; hdieresis
13852 \DeclareTextCompositeCommand{\"}{PU}{h}{\9036\047}% U+1E27
13853 % U+1E28 LATIN CAPITAL LETTER H WITH CEDILLA; Hcedilla
13854 \DeclareTextCompositeCommand{\c}{PU}{H}{\9036\050}% U+1E28
13855 % U+1E29 LATIN SMALL LETTER H WITH CEDILLA; hcedilla
13856 \DeclareTextCompositeCommand{\c}{PU}{h}{\9036\051}% U+1E29
13857 % U+1E30 LATIN CAPITAL LETTER K WITH ACUTE; Kacute
13858 \DeclareTextCompositeCommand{\'}{PU}{K}{\9036\060}% U+1E30
13859 % U+1E31 LATIN SMALL LETTER K WITH ACUTE; kacute
13860 \DeclareTextCompositeCommand{\'}{PU}{k}{\9036\061}% U+1E31
13861 % U+1E34 LATIN CAPITAL LETTER K WITH LINE BELOW; Klinebelow
13862 \DeclareTextCompositeCommand{\b}{PU}{K}{\9036\064}% U+1E34
13863 % U+1E35 LATIN SMALL LETTER K WITH LINE BELOW; klinebelow
13864 \DeclareTextCompositeCommand{\b}{PU}{k}{\9036\065}% U+1E35
13865 % U+1E3A LATIN CAPITAL LETTER L WITH LINE BELOW; Llinebelow
13866 \DeclareTextCompositeCommand{\b}{PU}{L}{\9036\072}% U+1E3A
13867 % U+1E3B LATIN SMALL LETTER L WITH LINE BELOW; llinebelow
13868 \DeclareTextCompositeCommand{\b}{PU}{l}{\9036\073}% U+1E3B
13869 % U+1E3E LATIN CAPITAL LETTER M WITH ACUTE; Macute
13870 \DeclareTextCompositeCommand{\'}{PU}{M}{\9036\076}% U+1E3E
13871 % U+1E3F LATIN SMALL LETTER M WITH ACUTE; macute
13872 \DeclareTextCompositeCommand{\'}{PU}{m}{\9036\077}% U+1E3F
13873 % U+1E40 LATIN CAPITAL LETTER M WITH DOT ABOVE; Mdotaccent
13874 \DeclareTextCompositeCommand{\.}{PU}{M}{\9036\100}% U+1E40
13875 % U+1E41 LATIN SMALL LETTER M WITH DOT ABOVE; mdotaccent
13876 \DeclareTextCompositeCommand{\.}{PU}{m}{\9036\101}% U+1E41
13877 % U+1E44 LATIN CAPITAL LETTER N WITH DOT ABOVE; Ndotaccent
13878 \DeclareTextCompositeCommand{\.}{PU}{N}{\9036\104}% U+1E44
13879 % U+1E45 LATIN SMALL LETTER N WITH DOT ABOVE; ndotaccent
13880 \DeclareTextCompositeCommand{\.}{PU}{n}{\9036\105}% U+1E45
13881 % U+1E48 LATIN CAPITAL LETTER N WITH LINE BELOW; Nlinebelow
13882 \DeclareTextCompositeCommand{\b}{PU}{N}{\9036\110}% U+1E48
13883 % U+1E49 LATIN SMALL LETTER N WITH LINE BELOW; nlinebelow
13884 \DeclareTextCompositeCommand{\b}{PU}{n}{\9036\111}% U+1E49
13885 % U+1E54 LATIN CAPITAL LETTER P WITH ACUTE; Pacute
13886 \DeclareTextCompositeCommand{\'}{PU}{P}{\9036\124}% U+1E54
13887 % U+1E55 LATIN SMALL LETTER P WITH ACUTE; pacute
13888 \DeclareTextCompositeCommand{\'}{PU}{p}{\9036\125}% U+1E55
13889 % U+1E56 LATIN CAPITAL LETTER P WITH DOT ABOVE; Pdotaccent
13890 \DeclareTextCompositeCommand{\.}{PU}{P}{\9036\126}% U+1E56
13891 % U+1E57 LATIN SMALL LETTER P WITH DOT ABOVE; pdotaccent
13892 \DeclareTextCompositeCommand{\.}{PU}{p}{\9036\127}% U+1E57
13893 % U+1E58 LATIN CAPITAL LETTER R WITH DOT ABOVE; Rdotaccent
13894 \DeclareTextCompositeCommand{\.}{PU}{R}{\9036\130}% U+1E58
13895 % U+1E59 LATIN SMALL LETTER R WITH DOT ABOVE; rdotaccent
13896 \DeclareTextCompositeCommand{\.}{PU}{r}{\9036\131}% U+1E59
13897 % U+1E5E LATIN CAPITAL LETTER R WITH LINE BELOW; Rlinebelow
13898 \DeclareTextCompositeCommand{\b}{PU}{R}{\9036\136}% U+1E5E

13899 % U+1E5F LATIN SMALL LETTER R WITH LINE BELOW; rlinebelow
13900 \DeclareTextCompositeCommand{\b}{PU}{r}{\9036\137}% U+1E5F
13901 % U+1E60 LATIN CAPITAL LETTER S WITH DOT ABOVE; Sdotaccent
13902 \DeclareTextCompositeCommand{\.}{PU}{S}{\9036\140}% U+1E60
13903 % U+1E61 LATIN SMALL LETTER S WITH DOT ABOVE; sdotaccent
13904 \DeclareTextCompositeCommand{\.}{PU}{s}{\9036\141}% U+1E61
13905 % U+1E6E LATIN CAPITAL LETTER T WITH LINE BELOW; Tlinebelow
13906 \DeclareTextCompositeCommand{\b}{PU}{T}{\9036\156}% U+1E6E
13907 % U+1E6F LATIN SMALL LETTER T WITH LINE BELOW; tlinebelow
13908 \DeclareTextCompositeCommand{\b}{PU}{t}{\9036\157}% U+1E6F
13909 % U+1E7C LATIN CAPITAL LETTER V WITH TILDE; Vtilde
13910 \DeclareTextCompositeCommand{\~}{PU}{V}{\9036\174}% U+1E7C
13911 % U+1E7D LATIN SMALL LETTER V WITH TILDE; vtilde
13912 \DeclareTextCompositeCommand{\~}{PU}{v}{\9036\175}% U+1E7D
13913 % U+1E80 LATIN CAPITAL LETTER W WITH GRAVE; Wgrave
13914 \DeclareTextCompositeCommand{\`}{PU}{W}{\9036\200}% U+1E80
13915 % U+1E81 LATIN SMALL LETTER W WITH GRAVE; wgrave
13916 \DeclareTextCompositeCommand{\`}{PU}{w}{\9036\201}% U+1E81
13917 % U+1E82 LATIN CAPITAL LETTER W WITH ACUTE; Wacute
13918 \DeclareTextCompositeCommand{\'}{PU}{W}{\9036\202}% U+1E82
13919 % U+1E83 LATIN SMALL LETTER W WITH ACUTE; wacute
13920 \DeclareTextCompositeCommand{\'}{PU}{w}{\9036\203}% U+1E83
13921 % U+1E84 LATIN CAPITAL LETTER W WITH DIAERESIS; Wdieresis
13922 \DeclareTextCompositeCommand{\"}{PU}{W}{\9036\204}% U+1E84
13923 % U+1E85 LATIN SMALL LETTER W WITH DIAERESIS; wdieresis
13924 \DeclareTextCompositeCommand{\"}{PU}{w}{\9036\205}% U+1E85
13925 % U+1E86 LATIN CAPITAL LETTER W WITH DOT ABOVE; Wdotaccent
13926 \DeclareTextCompositeCommand{\.}{PU}{W}{\9036\206}% U+1E86
13927 % U+1E87 LATIN SMALL LETTER W WITH DOT ABOVE; wdotaccent
13928 \DeclareTextCompositeCommand{\.}{PU}{w}{\9036\207}% U+1E87
13929 % U+1E8A LATIN CAPITAL LETTER X WITH DOT ABOVE; Xdotaccent
13930 \DeclareTextCompositeCommand{\.}{PU}{X}{\9036\212}% U+1E8A
13931 % U+1E8B LATIN SMALL LETTER X WITH DOT ABOVE; xdotaccent
13932 \DeclareTextCompositeCommand{\.}{PU}{x}{\9036\213}% U+1E8B
13933 % U+1E8C LATIN CAPITAL LETTER X WITH DIAERESIS; Xdieresis
13934 \DeclareTextCompositeCommand{\"}{PU}{X}{\9036\214}% U+1E8C
13935 % U+1E8D LATIN SMALL LETTER X WITH DIAERESIS; xdieresis
13936 \DeclareTextCompositeCommand{\"}{PU}{x}{\9036\215}% U+1E8D
13937 % U+1E8E LATIN CAPITAL LETTER Y WITH DOT ABOVE; Ydotaccent
13938 \DeclareTextCompositeCommand{\.}{PU}{Y}{\9036\216}% U+1E8E
13939 % U+1E8F LATIN SMALL LETTER Y WITH DOT ABOVE; ydotaccent
13940 \DeclareTextCompositeCommand{\.}{PU}{y}{\9036\217}% U+1E8F
13941 % U+1E90 LATIN CAPITAL LETTER Z WITH CIRCUMFLEX; Zcircumflex
13942 \DeclareTextCompositeCommand{\^}{PU}{Z}{\9036\220}% U+1E90
13943 % U+1E91 LATIN SMALL LETTER Z WITH CIRCUMFLEX; zcircumflex
13944 \DeclareTextCompositeCommand{\^}{PU}{z}{\9036\221}% U+1E91
13945 % U+1E94 LATIN CAPITAL LETTER Z WITH LINE BELOW; Zlinebelow
13946 \DeclareTextCompositeCommand{\b}{PU}{Z}{\9036\224}% U+1E94
13947 % U+1E95 LATIN SMALL LETTER Z WITH LINE BELOW; zlinebelow
13948 \DeclareTextCompositeCommand{\b}{PU}{z}{\9036\225}% U+1E95
13949 % U+1E96 LATIN SMALL LETTER H WITH LINE BELOW; hlinebelow
13950 \DeclareTextCompositeCommand{\b}{PU}{h}{\9036\226}% U+1E96
13951 % U+1E97 LATIN SMALL LETTER T WITH DIAERESIS; tdieresis
13952 \DeclareTextCompositeCommand{\"}{PU}{t}{\9036\227}% U+1E97
13953 % U+1E98 LATIN SMALL LETTER W WITH RING ABOVE; wring
13954 \DeclareTextCompositeCommand{\r}{PU}{w}{\9036\230}% U+1E98
13955 % U+1E99 LATIN SMALL LETTER Y WITH RING ABOVE; yring

13956 \DeclareTextCompositeCommand{\r}{PU}{y}{\9036\231}% U+1E99
 13957 % U+1E9B LATIN SMALL LETTER LONG S WITH DOT ABOVE; slongdotaccent
 13958 \DeclareTextCompositeCommand{.}{PU}{\textlongs}{\9036\233}% U+1E9B
 13959 % U+1EBC LATIN CAPITAL LETTER E WITH TILDE; Etilde
 13960 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
 13961 % U+1EBD LATIN SMALL LETTER E WITH TILDE; etilde
 13962 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
 13963 % U+1EF2 LATIN CAPITAL LETTER Y WITH GRAVE; Ygrave
 13964 \DeclareTextCompositeCommand{\`}{PU}{Y}{\9036\362}% U+1EF2
 13965 % U+1EF3 LATIN SMALL LETTER Y WITH GRAVE; ygrave
 13966 \DeclareTextCompositeCommand{\`}{PU}{y}{\9036\363}% U+1EF3
 13967 % U+1EF8 LATIN CAPITAL LETTER Y WITH TILDE; Ytilde
 13968 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
 13969 % U+1EF9 LATIN SMALL LETTER Y WITH TILDE; ytilde
 13970 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9

50.2.12 General Punctuation: U+2000 to U+206F

13971 % U+200C ZERO WIDTH NON-JOINER; *afii61664, zerowidthnonjoiner
 13972 \DeclareTextCommand{\textcompwordmark}{PU}{\9040\014}% U+200C
 13973 % U+2013 EN DASH; endash
 13974 \DeclareTextCommand{\textendash}{PU}{\9040\023}% U+2013
 13975 % U+2014 EM DASH; emdash
 13976 \DeclareTextCommand{\textemdash}{PU}{\9040\024}% U+2014
 13977 % U+2016 DOUBLE VERTICAL LINE; dblverticalbar
 13978 \DeclareTextCommand{\textbardbl}{PU}{\9040\026}% U+2016
 13979 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 13980 \DeclareTextCommand{\textquoteleft}{PU}{\9040\030}% U+2018
 13981 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 13982 \DeclareTextCommand{\textquoteright}{PU}{\9040\031}% U+2019
 13983 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 13984 \DeclareTextCommand{\quotesinglbase}{PU}{\9040\032}% U+201A
 13985 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
 13986 \DeclareTextCommand{\textquotedblleft}{PU}{\9040\034}% U+201C
 13987 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
 13988 \DeclareTextCommand{\textquotedblright}{PU}{\9040\035}% U+201D
 13989 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
 13990 \DeclareTextCommand{\quotedblbase}{PU}{\9040\036}% U+201E
 13991 % U+2020 DAGGER; dagger
 13992 \DeclareTextCommand{\textdagger}{PU}{\9040\040}% U+2020
 13993 % U+2021 DOUBLE DAGGER; daggerdbl
 13994 \DeclareTextCommand{\textdaggerdbl}{PU}{\9040\041}% U+2021
 13995 % U+2022 BULLET; bullet
 13996 \DeclareTextCommand{\textbullet}{PU}{\9040\042}% U+2022
 13997 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 13998 \DeclareTextCommand{\textellipsis}{PU}{\9040\046}% U+2026
 13999 % U+2030 PER MILLE SIGN; perthousand
 14000 \DeclareTextCommand{\textperthousand}{PU}{\9040\060}% U+2030
 14001 % U+2031 PER TEN THOUSAND SIGN
 14002 \DeclareTextCommand{\textpertenthousand}{PU}{\9040\061}% U+2031
 14003 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guilsinglleft
 14004 \DeclareTextCommand{\guilsinglleft}{PU}{\9040\071}% U+2039
 14005 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guilsinglright
 14006 \DeclareTextCommand{\guilsinglright}{PU}{\9040\072}% U+203A
 14007 % U+203B REFERENCE MARK; referencemark
 14008 \DeclareTextCommand{\textreferencemark}{PU}{\9040\073}% U+203B
 14009 % U+203D INTERROBANG
 14010 \DeclareTextCommand{\textinterrobang}{PU}{\9040\075}% U+203D

14011 % U+2044 FRACTION SLASH; fraction
14012 \DeclareTextCommand{\textfractionsolidus}{PU}{\9040\104}% U+2044
14013 % U+2045 LEFT SQUARE BRACKET WITH QUILL
14014 \DeclareTextCommand{\textlquill}{PU}{\9040\105}% U+2045
14015 % U+2046 RIGHT SQUARE BRACKET WITH QUILL
14016 \DeclareTextCommand{\textrquill}{PU}{\9040\106}% U+2046
14017 % U+2052 COMMERCIAL MINUS SIGN
14018 \DeclareTextCommand{\textdiscount}{PU}{\9040\122}% U+2052

50.2.13 Superscripts and Subscripts: U+2070 to U+209F

14019 % U+2070 SUPERSCRIPT ZERO; zerosuperior
14020 \DeclareTextCommand{\textzerosuperior}{PU}{\9040\160}% U+2070
14021 % U+2074 SUPERSCRIPT FOUR; foursuperior
14022 \DeclareTextCommand{\textfoursuperior}{PU}{\9040\164}% U+2074
14023 % U+2075 SUPERSCRIPT FIVE; fivesuperior
14024 \DeclareTextCommand{\textfivesuperior}{PU}{\9040\165}% U+2075
14025 % U+2076 SUPERSCRIPT SIX; sixsuperior
14026 \DeclareTextCommand{\textsixsuperior}{PU}{\9040\166}% U+2076
14027 % U+2077 SUPERSCRIPT SEVEN; sevensuperior
14028 \DeclareTextCommand{\textsevensuperior}{PU}{\9040\167}% U+2077
14029 % U+2078 SUPERSCRIPT EIGHT; eightsuperior
14030 \DeclareTextCommand{\texteightsuperior}{PU}{\9040\170}% U+2078
14031 % U+2079 SUPERSCRIPT NINE; ninesuperior
14032 \DeclareTextCommand{\textninesuperior}{PU}{\9040\171}% U+2079
14033 % U+207A SUPERSCRIPT PLUS SIGN; plussuperior
14034 \DeclareTextCommand{\textplussuperior}{PU}{\9040\172}% U+207A
14035 % U+207B SUPERSCRIPT MINUS
14036 \DeclareTextCommand{\textminussuperior}{PU}{\9040\173}
14037 % U+207C SUPERSCRIPT EQUALS SIGN; equalsuperior
14038 \DeclareTextCommand{\textequalsuperior}{PU}{\9040\174}
14039 % U+207D SUPERSCRIPT LEFT PARENTHESIS; parenleftsuperior
14040 \DeclareTextCommand{\textparenleftsuperior}{PU}{\9040\175}
14041 % U+207E SUPERSCRIPT RIGHT PARENTHESIS; parenrightsuperior
14042 \DeclareTextCommand{\textparenrightsuperior}{PU}{\9040\176}
14043 % U+207F SUPERSCRIPT LATIN SMALL LETTER N; nsuperior
14044 \DeclareTextCommand{\textnsuperior}{PU}{\9040\177}
14045 % U+2080 SUBSCRIPT ZERO; zeroinferior
14046 \DeclareTextCommand{\textzeroinferior}{PU}{\9040\200}% U+2080
14047 % U+2081 SUBSCRIPT ONE; oneinferior
14048 \DeclareTextCommand{\textoneinferior}{PU}{\9040\201}% U+2081
14049 % U+2082 SUBSCRIPT TWO; twoinferior
14050 \DeclareTextCommand{\texttwoinferior}{PU}{\9040\202}% U+2082
14051 % U+2083 SUBSCRIPT THREE; threeinferior
14052 \DeclareTextCommand{\textthreeinferior}{PU}{\9040\203}% U+2083
14053 % U+2084 SUBSCRIPT FOUR; fourinferior
14054 \DeclareTextCommand{\textfourinferior}{PU}{\9040\204}% U+2084
14055 % U+2085 SUBSCRIPT FIVE; fiveinferior
14056 \DeclareTextCommand{\textfiveinferior}{PU}{\9040\205}% U+2085
14057 % U+2086 SUBSCRIPT SIX; sixinferior
14058 \DeclareTextCommand{\textsixinferior}{PU}{\9040\206}% U+2086
14059 % U+2087 SUBSCRIPT SEVEN; seveninferior
14060 \DeclareTextCommand{\textseveninferior}{PU}{\9040\207}% U+2087
14061 % U+2088 SUBSCRIPT EIGHT; eightinferior
14062 \DeclareTextCommand{\texteightinferior}{PU}{\9040\210}% U+2088
14063 % U+2089 SUBSCRIPT NINE; nineinferior
14064 \DeclareTextCommand{\textnineinferior}{PU}{\9040\211}% U+2089
14065 % U+208D SUBSCRIPT LEFT PARENTHESIS; parenleftinferior

14066 \DeclareTextCommand{\textparenleftinferior}{PU}{\9040\215}% U+208D
 14067 % U+208E SUBSCRIPT RIGHT PARENTHESIS; parenrightinferior
 14068 \DeclareTextCommand{\textparenrightinferior}{PU}{\9040\216}% U+208E

50.2.14 Currency Symbols: U+20A0 to U+20CF

14069 % U+20A1 COLON SIGN; *colonmonetary, colonsign
 14070 \DeclareTextCommand{\textcolonmonetary}{PU}{\9040\241}% U+20A1
 14071 % U+20A4 LIRA SIGN; afii08941, *lira
 14072 \DeclareTextCommand{\textlira}{PU}{\9040\244}% U+20A4
 14073 % U+20A6 NAIRA SIGN
 14074 \DeclareTextCommand{\textnaira}{PU}{\9040\246}% U+20A6
 14075 % U+20A7 PESETA SIGN; peseta
 14076 \DeclareTextCommand{\textpeseta}{PU}{\9040\247}% U+20A7
 14077 % U+20A9 WON SIGN; won
 14078 \DeclareTextCommand{\textwon}{PU}{\9040\251}% U+20A9
 14079 % U+20AB DONG SIGN; dong
 14080 \DeclareTextCommand{\textdong}{PU}{\9040\253}% U+20AB
 14081 % U+20AC EURO SIGN; *Euro, euro
 14082 \DeclareTextCommand{\texteuro}{PU}{\9040\254}% U+20AC
 14083 % U+20B1 PESO SIGN
 14084 \DeclareTextCommand{\textpeso}{PU}{\9040\261}% U+20B1
 14085 % U+20B2 GUARANI SIGN
 14086 \DeclareTextCommand{\textguarani}{PU}{\9040\262}% U+20B2

50.2.15 Letterlike Symbols: U+2100 to U+214F

14087 % U+2103 DEGREE CELSIUS; centigrade
 14088 \DeclareTextCommand{\textcelsius}{PU}{\9041\003}% U+2103
 14089 % U+2116 NUMERO SIGN; *afii61352, numero
 14090 \DeclareTextCommand{\textnumero}{PU}{\9041\026}% U+2116
 14091 % U+2117 SOUND RECORDING COPYRIGHT
 14092 \DeclareTextCommand{\textcircledP}{PU}{\9041\027}% U+2117
 14093 % U+211E PRESCRIPTION TAKE; prescription
 14094 \DeclareTextCommand{\textrecipe}{PU}{\9041\036}% U+211E
 14095 % U+2120 SERVICE MARK
 14096 \DeclareTextCommand{\textservicemark}{PU}{\9041\040}% U+2120
 14097 % U+2122 TRADE MARK SIGN; trademark
 14098 \DeclareTextCommand{\texttrademark}{PU}{\9041\042}% U+2122
 14099 % U+2126 OHM SIGN; Ohm, Omega
 14100 \DeclareTextCommand{\textohm}{PU}{\9041\046}% U+2126
 14101 % U+2127 INVERTED OHM SIGN
 14102 \DeclareTextCommand{\textmho}{PU}{\9041\047}% U+2127
 14103 % U+212B ANGSTROM SIGN; angstrom
 14104 \DeclareTextCommand{\textangstrom}{PU}{\9041\053}% U+212B
 14105 % U+212E ESTIMATED SYMBOL; estimated
 14106 \DeclareTextCommand{\textestimated}{PU}{\9041\056}% U+212E
 14107 % U+2135 ALEF SYMBOL; aleph
 14108 \DeclareTextCommand{\textaleph}{PU}{\9041\065}% U+2135

50.2.16 Arrows: U+2190 to U+21FF

14109 % U+2190 LEFTWARDS ARROW; arrowleft
 14110 \DeclareTextCommand{\textleftarrow}{PU}{\9041\220}% U+2190
 14111 % U+2191 UPWARDS ARROW; arrowup
 14112 \DeclareTextCommand{\textuparrow}{PU}{\9041\221}% U+2191
 14113 % U+2192 RIGHTWARDS ARROW; arrowright
 14114 \DeclareTextCommand{\textrightarrow}{PU}{\9041\222}% U+2192
 14115 % U+2193 DOWNWARDS ARROW; arrowdown
 14116 \DeclareTextCommand{\textdownarrow}{PU}{\9041\223}% U+2193

50.2.17 Mathematical Operators: U+2200 to U+22FF

14117 % U+2212 MINUS SIGN; minus
14118 \DeclareTextCommand{\textminus}{PU}{\9042\022}% U+2212
14119 % U+221A SQUARE ROOT; radical
14120 \DeclareTextCommand{\textsurd}{PU}{\9042\032}% U+221A

50.2.18 Miscellaneous Technical: U+2300 to U+23FF

14121 % U+2329 LEFT-POINTING ANGLE BRACKET; angleleft
14122 \DeclareTextCommand{\textlangle}{PU}{\9043\051}% U+2329
14123 % U+232A RIGHT-POINTING ANGLE BRACKET; angleright
14124 \DeclareTextCommand{\textrangle}{PU}{\9043\052}% U+232A

50.2.19 Control Pictures: U+2400 to U+243F

14125 % U+2422 BLANK SYMBOL
14126 \DeclareTextCommand{\textblank}{PU}{\9044\042}% U+2422
14127 % U+2423 OPEN BOX; blank
14128 \DeclareTextCommand{\textvisiblespace}{PU}{\9044\043}% U+2423

50.2.20 Enclosed Alphanumerics: U+2460 to U+24FF

14129 % U+2460 CIRCLED DIGIT ONE; onecircle
14130 \DeclareTextCompositeCommand{\textcircled}{PU}{1}{\9044\140}% U+2460
14131 % U+2461 CIRCLED DIGIT TWO; twocircle
14132 \DeclareTextCompositeCommand{\textcircled}{PU}{2}{\9044\141}% U+2461
14133 % U+2462 CIRCLED DIGIT THREE; threecircle
14134 \DeclareTextCompositeCommand{\textcircled}{PU}{3}{\9044\142}% U+2462
14135 % U+2463 CIRCLED DIGIT FOUR; fourcircle
14136 \DeclareTextCompositeCommand{\textcircled}{PU}{4}{\9044\143}% U+2463
14137 % U+2464 CIRCLED DIGIT FIVE; fivecircle
14138 \DeclareTextCompositeCommand{\textcircled}{PU}{5}{\9044\144}% U+2464
14139 % U+2465 CIRCLED DIGIT SIX; sixcircle
14140 \DeclareTextCompositeCommand{\textcircled}{PU}{6}{\9044\145}% U+2465
14141 % U+2466 CIRCLED DIGIT SEVEN; sevencircle
14142 \DeclareTextCompositeCommand{\textcircled}{PU}{7}{\9044\146}% U+2466
14143 % U+2467 CIRCLED DIGIT EIGHT; eightcircle
14144 \DeclareTextCompositeCommand{\textcircled}{PU}{8}{\9044\147}% U+2467
14145 % U+2468 CIRCLED DIGIT NINE; ninecircle
14146 \DeclareTextCompositeCommand{\textcircled}{PU}{9}{\9044\150}% U+2468
14147 % U+2469 CIRCLED NUMBER TEN; tencircle
14148 \DeclareTextCompositeCommand{\textcircled}{PU}{10}{\9044\151}% U+2469
14149 % U+246A CIRCLED NUMBER ELEVEN; elevencircle
14150 \DeclareTextCompositeCommand{\textcircled}{PU}{11}{\9044\152}% U+246A
14151 % U+246B CIRCLED NUMBER TWELVE; twelvecircle
14152 \DeclareTextCompositeCommand{\textcircled}{PU}{12}{\9044\153}% U+246B
14153 % U+246C CIRCLED NUMBER THIRTEEN; thirteencircle
14154 \DeclareTextCompositeCommand{\textcircled}{PU}{13}{\9044\154}% U+246C
14155 % U+246D CIRCLED NUMBER FOURTEEN; fourteencircle
14156 \DeclareTextCompositeCommand{\textcircled}{PU}{14}{\9044\155}% U+246D
14157 % U+246E CIRCLED NUMBER FIFTEEN; fifteencircle
14158 \DeclareTextCompositeCommand{\textcircled}{PU}{15}{\9044\156}% U+246E
14159 % U+246F CIRCLED NUMBER SIXTEEN; sixteencircle
14160 \DeclareTextCompositeCommand{\textcircled}{PU}{16}{\9044\157}% U+246F
14161 % U+2470 CIRCLED NUMBER SEVENTEEN; seventeencircle
14162 \DeclareTextCompositeCommand{\textcircled}{PU}{17}{\9044\160}% U+2470
14163 % U+2471 CIRCLED NUMBER EIGHTEEN; eighteencircle
14164 \DeclareTextCompositeCommand{\textcircled}{PU}{18}{\9044\161}% U+2471
14165 % U+2472 CIRCLED NUMBER NINETEEN; nineteencircle
14166 \DeclareTextCompositeCommand{\textcircled}{PU}{19}{\9044\162}% U+2472

14167 % U+2473 CIRCLED NUMBER TWENTY; twentycircle
 14168 \DeclareTextCompositeCommand{\textcircled}{PU}{20}{\9044\163}% U+2473
 14169 % U+24B6 CIRCLED LATIN CAPITAL LETTER A; Acircle
 14170 \DeclareTextCompositeCommand{\textcircled}{PU}{A}{\9044\266}% U+24B6
 14171 % U+24B7 CIRCLED LATIN CAPITAL LETTER B; Bcircle
 14172 \DeclareTextCompositeCommand{\textcircled}{PU}{B}{\9044\267}% U+24B7
 14173 % U+24B8 CIRCLED LATIN CAPITAL LETTER C; Ccircle
 14174 \DeclareTextCompositeCommand{\textcircled}{PU}{C}{\9044\270}% U+24B8
 14175 % U+24B9 CIRCLED LATIN CAPITAL LETTER D; Dcircle
 14176 \DeclareTextCompositeCommand{\textcircled}{PU}{D}{\9044\271}% U+24B9
 14177 % U+24BA CIRCLED LATIN CAPITAL LETTER E; Ecircle
 14178 \DeclareTextCompositeCommand{\textcircled}{PU}{E}{\9044\272}% U+24BA
 14179 % U+24BB CIRCLED LATIN CAPITAL LETTER F; Fcircle
 14180 \DeclareTextCompositeCommand{\textcircled}{PU}{F}{\9044\273}% U+24BB
 14181 % U+24BC CIRCLED LATIN CAPITAL LETTER G; Gcircle
 14182 \DeclareTextCompositeCommand{\textcircled}{PU}{G}{\9044\274}% U+24BC
 14183 % U+24BD CIRCLED LATIN CAPITAL LETTER H; Hcircle
 14184 \DeclareTextCompositeCommand{\textcircled}{PU}{H}{\9044\275}% U+24BD
 14185 % U+24BE CIRCLED LATIN CAPITAL LETTER I; Icircle
 14186 \DeclareTextCompositeCommand{\textcircled}{PU}{I}{\9044\276}% U+24BE
 14187 % U+24BF CIRCLED LATIN CAPITAL LETTER J; Jcircle
 14188 \DeclareTextCompositeCommand{\textcircled}{PU}{J}{\9044\277}% U+24BF
 14189 % U+24C0 CIRCLED LATIN CAPITAL LETTER K; Kcircle
 14190 \DeclareTextCompositeCommand{\textcircled}{PU}{K}{\9044\300}% U+24C0
 14191 % U+24C1 CIRCLED LATIN CAPITAL LETTER L; Lcircle
 14192 \DeclareTextCompositeCommand{\textcircled}{PU}{L}{\9044\301}% U+24C1
 14193 % U+24C2 CIRCLED LATIN CAPITAL LETTER M; Mcircle
 14194 \DeclareTextCompositeCommand{\textcircled}{PU}{M}{\9044\302}% U+24C2
 14195 % U+24C3 CIRCLED LATIN CAPITAL LETTER N; Ncircle
 14196 \DeclareTextCompositeCommand{\textcircled}{PU}{N}{\9044\303}% U+24C3
 14197 % U+24C4 CIRCLED LATIN CAPITAL LETTER O; Ocircle
 14198 \DeclareTextCompositeCommand{\textcircled}{PU}{O}{\9044\304}% U+24C4
 14199 % U+24C5 CIRCLED LATIN CAPITAL LETTER P; Pcircle
 14200 \DeclareTextCompositeCommand{\textcircled}{PU}{P}{\9044\305}% U+24C5
 14201 % U+24C6 CIRCLED LATIN CAPITAL LETTER Q; Qcircle
 14202 \DeclareTextCompositeCommand{\textcircled}{PU}{Q}{\9044\306}% U+24C6
 14203 % U+24C7 CIRCLED LATIN CAPITAL LETTER R; Rcircle
 14204 \DeclareTextCompositeCommand{\textcircled}{PU}{R}{\9044\307}% U+24C7
 14205 % U+24C8 CIRCLED LATIN CAPITAL LETTER S; Scircle
 14206 \DeclareTextCompositeCommand{\textcircled}{PU}{S}{\9044\310}% U+24C8
 14207 % U+24C9 CIRCLED LATIN CAPITAL LETTER T; Tcircle
 14208 \DeclareTextCompositeCommand{\textcircled}{PU}{T}{\9044\311}% U+24C9
 14209 % U+24CA CIRCLED LATIN CAPITAL LETTER U; Ucircle
 14210 \DeclareTextCompositeCommand{\textcircled}{PU}{U}{\9044\312}% U+24CA
 14211 % U+24CB CIRCLED LATIN CAPITAL LETTER V; Vcircle
 14212 \DeclareTextCompositeCommand{\textcircled}{PU}{V}{\9044\313}% U+24CB
 14213 % U+24CC CIRCLED LATIN CAPITAL LETTER W; Wcircle
 14214 \DeclareTextCompositeCommand{\textcircled}{PU}{W}{\9044\314}% U+24CC
 14215 % U+24CD CIRCLED LATIN CAPITAL LETTER X; Xcircle
 14216 \DeclareTextCompositeCommand{\textcircled}{PU}{X}{\9044\315}% U+24CD
 14217 % U+24CE CIRCLED LATIN CAPITAL LETTER Y; Ycircle
 14218 \DeclareTextCompositeCommand{\textcircled}{PU}{Y}{\9044\316}% U+24CE
 14219 % U+24CF CIRCLED LATIN CAPITAL LETTER Z; Zcircle
 14220 \DeclareTextCompositeCommand{\textcircled}{PU}{Z}{\9044\317}% U+24CF
 14221 % U+24D0 CIRCLED LATIN SMALL LETTER A; acircle
 14222 \DeclareTextCompositeCommand{\textcircled}{PU}{a}{\9044\320}% U+24D0
 14223 % U+24D1 CIRCLED LATIN SMALL LETTER B; bcircle

14224 \DeclareTextCompositeCommand{\textcircled}{PU}{b}{\9044\321}% U+24D1
 14225 % U+24D2 CIRCLED LATIN SMALL LETTER C; ccircle
 14226 \DeclareTextCompositeCommand{\textcircled}{PU}{c}{\9044\322}% U+24D2
 14227 % U+24D3 CIRCLED LATIN SMALL LETTER D; dcircle
 14228 \DeclareTextCompositeCommand{\textcircled}{PU}{d}{\9044\323}% U+24D3
 14229 % U+24D4 CIRCLED LATIN SMALL LETTER E; ecircle
 14230 \DeclareTextCompositeCommand{\textcircled}{PU}{e}{\9044\324}% U+24D4
 14231 % U+24D5 CIRCLED LATIN SMALL LETTER F; fcircle
 14232 \DeclareTextCompositeCommand{\textcircled}{PU}{f}{\9044\325}% U+24D5
 14233 % U+24D6 CIRCLED LATIN SMALL LETTER G; gcircle
 14234 \DeclareTextCompositeCommand{\textcircled}{PU}{g}{\9044\326}% U+24D6
 14235 % U+24D7 CIRCLED LATIN SMALL LETTER H; hcircle
 14236 \DeclareTextCompositeCommand{\textcircled}{PU}{h}{\9044\327}% U+24D7
 14237 % U+24D8 CIRCLED LATIN SMALL LETTER I; icircle
 14238 \DeclareTextCompositeCommand{\textcircled}{PU}{i}{\9044\330}% U+24D8
 14239 % U+24D9 CIRCLED LATIN SMALL LETTER J; jcircle
 14240 \DeclareTextCompositeCommand{\textcircled}{PU}{j}{\9044\331}% U+24D9
 14241 % U+24DA CIRCLED LATIN SMALL LETTER K; kcircle
 14242 \DeclareTextCompositeCommand{\textcircled}{PU}{k}{\9044\332}% U+24DA
 14243 % U+24DB CIRCLED LATIN SMALL LETTER L; lcircle
 14244 \DeclareTextCompositeCommand{\textcircled}{PU}{l}{\9044\333}% U+24DB
 14245 % U+24DC CIRCLED LATIN SMALL LETTER M; mcircle
 14246 \DeclareTextCompositeCommand{\textcircled}{PU}{m}{\9044\334}% U+24DC
 14247 % U+24DD CIRCLED LATIN SMALL LETTER N; ncircle
 14248 \DeclareTextCompositeCommand{\textcircled}{PU}{n}{\9044\335}% U+24DD
 14249 % U+24DE CIRCLED LATIN SMALL LETTER O; ocircle
 14250 \DeclareTextCompositeCommand{\textcircled}{PU}{o}{\9044\336}% U+24DE
 14251 % U+24DF CIRCLED LATIN SMALL LETTER P; pcircle
 14252 \DeclareTextCompositeCommand{\textcircled}{PU}{p}{\9044\337}% U+24DF
 14253 % U+24E0 CIRCLED LATIN SMALL LETTER Q; qcircle
 14254 \DeclareTextCompositeCommand{\textcircled}{PU}{q}{\9044\340}% U+24E0
 14255 % U+24E1 CIRCLED LATIN SMALL LETTER R; rcircle
 14256 \DeclareTextCompositeCommand{\textcircled}{PU}{r}{\9044\341}% U+24E1
 14257 % U+24E2 CIRCLED LATIN SMALL LETTER S; scircle
 14258 \DeclareTextCompositeCommand{\textcircled}{PU}{s}{\9044\342}% U+24E2
 14259 % U+24E3 CIRCLED LATIN SMALL LETTER T; tcircle
 14260 \DeclareTextCompositeCommand{\textcircled}{PU}{t}{\9044\343}% U+24E3
 14261 % U+24E4 CIRCLED LATIN SMALL LETTER U; ucircle
 14262 \DeclareTextCompositeCommand{\textcircled}{PU}{u}{\9044\344}% U+24E4
 14263 % U+24E5 CIRCLED LATIN SMALL LETTER V; vcircle
 14264 \DeclareTextCompositeCommand{\textcircled}{PU}{v}{\9044\345}% U+24E5
 14265 % U+24E6 CIRCLED LATIN SMALL LETTER W; wcircle
 14266 \DeclareTextCompositeCommand{\textcircled}{PU}{w}{\9044\346}% U+24E6
 14267 % U+24E7 CIRCLED LATIN SMALL LETTER X; xcircle
 14268 \DeclareTextCompositeCommand{\textcircled}{PU}{x}{\9044\347}% U+24E7
 14269 % U+24E8 CIRCLED LATIN SMALL LETTER Y; ycircle
 14270 \DeclareTextCompositeCommand{\textcircled}{PU}{y}{\9044\350}% U+24E8
 14271 % U+24E9 CIRCLED LATIN SMALL LETTER Z; zcircle
 14272 \DeclareTextCompositeCommand{\textcircled}{PU}{z}{\9044\351}% U+24E9
 14273 % U+24EA CIRCLED DIGIT ZERO
 14274 \DeclareTextCompositeCommand{\textcircled}{PU}{0}{\9044\352}% U+24EA

50.2.21 Box Drawing: U+2500 to U+257F

14275 % U+25E6 WHITE BULLET; *openbullet, whitebullet
 14276 \DeclareTextCommand{\textopenbullet}{PU}{\9045\346}% U+25E6
 14277 % U+25EF LARGE CIRCLE; largecircle
 14278 \DeclareTextCommand{\textbigcircle}{PU}{\9045\357}% U+25EF

50.2.22 Miscellaneous Symbols: U+2600 to U+26FF

```
14279 % U+266A EIGHTH NOTE; musicalnote
14280 \DeclareTextCommand{\textmusicalnote}{PU}{\9046\152}% U+266A
14281 % U+26AD MARRIAGE SYMBOL
14282 \DeclareTextCommand{\textmarried}{PU}{\9046\255}% U+26AD
14283 % U+26AE DIVORCE SYMBOL
14284 \DeclareTextCommand{\textdivorced}{PU}{\9046\256}% U+26AE
```

50.2.23 Miscellaneous Mathematical Symbols-A: U+27C0 to U+27EF

```
14285 % U+27E6 MATHEMATICAL LEFT WHITE SQUARE BRACKET
14286 \DeclareTextCommand{\textlbrackdbl}{PU}{\9047\346}% U+27E6
14287 % U+27E7 MATHEMATICAL RIGHT WHITE SQUARE BRACKET
14288 \DeclareTextCommand{\textrbrackdbl}{PU}{\9047\347}% U+27E7
```

50.2.24 Alphabetic Presentation Forms: U+FB00 to U+FB4F

```
14289 % U+FB01 LATIN SMALL LIGATURE FI; fi
14290 \DeclareTextCommand{\textfi}{PU}{\9373\001}% U+FB01
14291 % U+FB02 LATIN SMALL LIGATURE FL; fl
14292 \DeclareTextCommand{\textfl}{PU}{\9373\002}% U+FB02
```

50.2.25 Miscellaneous

```
14293 \DeclareTextCommand{\SS}{PU}{SS}
```

50.2.26 Aliases

Aliases (german.sty)

```
14294 \DeclareTextCommand{\textglqq}{PU}{\quotedblbase}
14295 \DeclareTextCommand{\textgrqq}{PU}{\textquotedblleft}
14296 \DeclareTextCommand{\textglq}{PU}{\quotesinglbase}
14297 \DeclareTextCommand{\textgrq}{PU}{\textquoteleft}
14298 \DeclareTextCommand{\textflqq}{PU}{\guillemotleft}
14299 \DeclareTextCommand{\textfrqq}{PU}{\guillemotright}
14300 \DeclareTextCommand{\textflq}{PU}{\guilsinglleft}
14301 \DeclareTextCommand{\textfrq}{PU}{\guilsinglright}
```

Aliases (math names)

```
14302 \DeclareTextCommand{\textneg}{PU}{\textlogicalnot}
14303 \DeclareTextCommand{\texttimes}{PU}{\textmultiply}
14304 \DeclareTextCommand{\textdiv}{PU}{\textdivide}
14305 \DeclareTextCommand{\textpm}{PU}{\textplusminus}
14306 \DeclareTextCommand{\textcdot}{PU}{\textperiodcentered}
14307 </puenc>
```

50.3 PU encoding, additions for VnTeX

This file is provided by Han The Thanh.

```
14308 <*puvnenc>
14309 \DeclareTextCommand{\abreve}{PU}{\81\003}
14310 \DeclareTextCommand{\acircumflex}{PU}{\80\342}
14311 \DeclareTextCommand{\dj}{PU}{\81\021}
14312 \DeclareTextCommand{\ecircumflex}{PU}{\80\352}
14313 \DeclareTextCommand{\ocircumflex}{PU}{\80\364}
14314 \DeclareTextCommand{\ohorn}{PU}{\81\241}
14315 \DeclareTextCommand{\uhorn}{PU}{\81\260}
14316 \DeclareTextCommand{\ABREVE}{PU}{\81\002}
14317 \DeclareTextCommand{\ACIRCUMFLEX}{PU}{\80\302}
```


14318 \DeclareTextCommand{\DJ}{PU}{\81\020}
14319 \DeclareTextCommand{\ECIRCUMFLEX}{PU}{\80\312}
14320 \DeclareTextCommand{\OCIRCUMFLEX}{PU}{\80\324}
14321 \DeclareTextCommand{\OHORN}{PU}{\81\240}
14322 \DeclareTextCommand{\UHORN}{PU}{\81\257}

14323 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}
14324 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}
14325 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\340}
14326 \DeclareTextCompositeCommand{\h}{PU}{a}{\9036\243}
14327 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}
14328 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\257}
14329 \DeclareTextCompositeCommand{\d}{PU}{\abreve}{\9036\267}
14330 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\261}
14331 \DeclareTextCompositeCommand{\h}{PU}{\abreve}{\9036\263}
14332 \DeclareTextCompositeCommand{\~}{PU}{\abreve}{\9036\265}
14333 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\245}
14334 \DeclareTextCompositeCommand{\d}{PU}{\acircumflex}{\9036\255}
14335 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\247}
14336 \DeclareTextCompositeCommand{\h}{PU}{\acircumflex}{\9036\251}
14337 \DeclareTextCompositeCommand{\~}{PU}{\acircumflex}{\9036\253}
14338 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}
14339 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}
14340 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\350}
14341 \DeclareTextCompositeCommand{\h}{PU}{e}{\9036\273}
14342 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}
14343 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\277}
14344 \DeclareTextCompositeCommand{\d}{PU}{\ecircumflex}{\9036\307}
14345 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\301}
14346 \DeclareTextCompositeCommand{\h}{PU}{\ecircumflex}{\9036\303}
14347 \DeclareTextCompositeCommand{\~}{PU}{\ecircumflex}{\9036\305}
14348 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}
14349 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}
14350 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}
14351 \DeclareTextCompositeCommand{\h}{PU}{i}{\9036\311}
14352 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}
14353 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}
14354 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}
14355 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\362}
14356 \DeclareTextCompositeCommand{\h}{PU}{o}{\9036\317}
14357 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}
14358 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\321}
14359 \DeclareTextCompositeCommand{\d}{PU}{\ocircumflex}{\9036\331}
14360 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\323}
14361 \DeclareTextCompositeCommand{\h}{PU}{\ocircumflex}{\9036\325}
14362 \DeclareTextCompositeCommand{\~}{PU}{\ocircumflex}{\9036\327}
14363 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\333}
14364 \DeclareTextCompositeCommand{\d}{PU}{\ohorn}{\9036\343}
14365 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\335}
14366 \DeclareTextCompositeCommand{\h}{PU}{\ohorn}{\9036\337}
14367 \DeclareTextCompositeCommand{\~}{PU}{\ohorn}{\9036\341}
14368 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}
14369 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}
14370 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\371}
14371 \DeclareTextCompositeCommand{\h}{PU}{u}{\9036\347}
14372 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}
14373 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\351}
14374 \DeclareTextCompositeCommand{\d}{PU}{\uhorn}{\9036\361}

14375 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\353}
14376 \DeclareTextCompositeCommand{\h}{PU}{\uhorn}{\9036\355}
14377 \DeclareTextCompositeCommand{\~}{PU}{\uhorn}{\9036\357}
14378 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}
14379 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}
14380 \DeclareTextCompositeCommand{\'}{PU}{y}{\9036\363}
14381 \DeclareTextCompositeCommand{\h}{PU}{y}{\9036\367}
14382 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}
14383 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}
14384 \DeclareTextCompositeCommand{\d}{PU}{A}{\9036\240}
14385 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\300}
14386 \DeclareTextCompositeCommand{\h}{PU}{A}{\9036\242}
14387 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}
14388 \DeclareTextCompositeCommand{\'}{PU}{\ABREVE}{\9036\256}
14389 \DeclareTextCompositeCommand{\d}{PU}{\ABREVE}{\9036\266}
14390 \DeclareTextCompositeCommand{\'}{PU}{\ABREVE}{\9036\260}
14391 \DeclareTextCompositeCommand{\h}{PU}{\ABREVE}{\9036\262}
14392 \DeclareTextCompositeCommand{\~}{PU}{\ABREVE}{\9036\264}
14393 \DeclareTextCompositeCommand{\'}{PU}{\ACIRCUMFLEX}{\9036\244}
14394 \DeclareTextCompositeCommand{\d}{PU}{\ACIRCUMFLEX}{\9036\254}
14395 \DeclareTextCompositeCommand{\'}{PU}{\ACIRCUMFLEX}{\9036\246}
14396 \DeclareTextCompositeCommand{\h}{PU}{\ACIRCUMFLEX}{\9036\250}
14397 \DeclareTextCompositeCommand{\~}{PU}{\ACIRCUMFLEX}{\9036\252}
14398 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}
14399 \DeclareTextCompositeCommand{\d}{PU}{E}{\9036\270}
14400 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\310}
14401 \DeclareTextCompositeCommand{\h}{PU}{E}{\9036\272}
14402 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}
14403 \DeclareTextCompositeCommand{\'}{PU}{\ECIRCUMFLEX}{\9036\276}
14404 \DeclareTextCompositeCommand{\d}{PU}{\ECIRCUMFLEX}{\9036\306}
14405 \DeclareTextCompositeCommand{\'}{PU}{\ECIRCUMFLEX}{\9036\300}
14406 \DeclareTextCompositeCommand{\h}{PU}{\ECIRCUMFLEX}{\9036\302}
14407 \DeclareTextCompositeCommand{\~}{PU}{\ECIRCUMFLEX}{\9036\304}
14408 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}
14409 \DeclareTextCompositeCommand{\d}{PU}{I}{\9036\312}
14410 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\314}
14411 \DeclareTextCompositeCommand{\h}{PU}{I}{\9036\310}
14412 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}
14413 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}
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14416 \DeclareTextCompositeCommand{\h}{PU}{O}{\9036\316}
14417 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}
14418 \DeclareTextCompositeCommand{\'}{PU}{\OCIRCUMFLEX}{\9036\320}
14419 \DeclareTextCompositeCommand{\d}{PU}{\OCIRCUMFLEX}{\9036\330}
14420 \DeclareTextCompositeCommand{\'}{PU}{\OCIRCUMFLEX}{\9036\322}
14421 \DeclareTextCompositeCommand{\h}{PU}{\OCIRCUMFLEX}{\9036\324}
14422 \DeclareTextCompositeCommand{\~}{PU}{\OCIRCUMFLEX}{\9036\326}
14423 \DeclareTextCompositeCommand{\'}{PU}{\OHORN}{\9036\332}
14424 \DeclareTextCompositeCommand{\d}{PU}{\OHORN}{\9036\342}
14425 \DeclareTextCompositeCommand{\'}{PU}{\OHORN}{\9036\334}
14426 \DeclareTextCompositeCommand{\h}{PU}{\OHORN}{\9036\336}
14427 \DeclareTextCompositeCommand{\~}{PU}{\OHORN}{\9036\340}
14428 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}
14429 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}
14430 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\331}
14431 \DeclareTextCompositeCommand{\h}{PU}{U}{\9036\346}

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14432 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}
14433 \DeclareTextCompositeCommand{\'}{PU}{\UHORN}{\9036\350}
14434 \DeclareTextCompositeCommand{\d}{PU}{\UHORN}{\9036\360}
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14437 \DeclareTextCompositeCommand{\~}{PU}{\UHORN}{\9036\356}
14438 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}
14439 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}
14440 \DeclareTextCompositeCommand{\'}{PU}{Y}{\9036\362}
14441 \DeclareTextCompositeCommand{\h}{PU}{Y}{\9036\366}
14442 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}
14443 </puvnenc>

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50.4 PU encoding, additions for Arabi

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14444 <*puarenc>
14445 \DeclareTextCommand{\hamza}{PU}{\86\041}% 0621;afii57409;ARABIC LETTER HAMZA
14446 \DeclareTextCommand{\alefmadda}{PU}{\86\042}% 0622;afii57410;ARABIC LETTER ALEF WITH MADDA A
14447 \DeclareTextCommand{\alefhamza}{PU}{\86\043}% 0623;afii57411;ARABIC LETTER ALEF WITH HAMZA A
14448 \DeclareTextCommand{\wawhamza}{PU}{\86\044}% 0624;afii57412;ARABIC LETTER WAW WITH HAMZA AE
14449 \DeclareTextCommand{\aleflowerhamza}{PU}{\86\045}% 0625;afii57413;ARABIC LETTER ALEF WITH HA
14450 \DeclareTextCommand{\yahamza}{PU}{\86\046}% 0626;afii57414;ARABIC LETTER YEH WITH HAMZA ABOVE
14451 \DeclareTextCommand{\alef}{PU}{\86\047}% 0627;afii57415;ARABIC LETTER ALEF
14452 \DeclareTextCommand{\baa}{PU}{\86\050}% 0628;afii57416;ARABIC LETTER BEH
14453 \DeclareTextCommand{\T}{PU}{\86\051}% 0629;afii57417;ARABIC LETTER TEH MARBUTA
14454 \DeclareTextCommand{\taa}{PU}{\86\052}% 062A;afii57418;ARABIC LETTER TEH
14455 \DeclareTextCommand{\thaa}{PU}{\86\053}% 062B;afii57419;ARABIC LETTER THEH
14456 \DeclareTextCommand{\jeem}{PU}{\86\054}% 062C;afii57420;ARABIC LETTER JEEM
14457 \DeclareTextCommand{\Haa}{PU}{\86\055}% 062D;afii57421;ARABIC LETTER HAH
14458 \DeclareTextCommand{\kha}{PU}{\86\056}% 062E;afii57422;ARABIC LETTER KHAH
14459 \DeclareTextCommand{\dal}{PU}{\86\057}% 062F;afii57423;ARABIC LETTER DAL
14460 \DeclareTextCommand{\dhal}{PU}{\86\060}% 0630;afii57424;ARABIC LETTER THAL
14461 \DeclareTextCommand{\ra}{PU}{\86\061}% 0631;afii57425;ARABIC LETTER REH
14462 \DeclareTextCommand{\zay}{PU}{\86\062}% 0632;afii57426;ARABIC LETTER ZAIN
14463 \DeclareTextCommand{\seen}{PU}{\86\063}% 0633;afii57427;ARABIC LETTER SEEN
14464 \DeclareTextCommand{\sheen}{PU}{\86\064}% 0634;afii57428;ARABIC LETTER SHEEN
14465 \DeclareTextCommand{\sad}{PU}{\86\065}% 0635;afii57429;ARABIC LETTER SAD
14466 \DeclareTextCommand{\dad}{PU}{\86\066}% 0636;afii57430;ARABIC LETTER DAD
14467 \DeclareTextCommand{\Ta}{PU}{\86\067}% 0637;afii57431;ARABIC LETTER TAH
14468 \DeclareTextCommand{\za}{PU}{\86\070}% 0638;afii57432;ARABIC LETTER ZAH
14469 \DeclareTextCommand{\ayn}{PU}{\86\071}% 0639;afii57433;ARABIC LETTER AIN
14470 \DeclareTextCommand{\ghayn}{PU}{\86\072}% 063A;afii57434;ARABIC LETTER GHAIN
14471 \DeclareTextCommand{\tatweel}{PU}{\86\100}% 0640;afii57440;ARABIC TATWEEL
14472 \DeclareTextCommand{\fa}{PU}{\86\101}% 0641;afii57441;ARABIC LETTER FEH
14473 \DeclareTextCommand{\qaf}{PU}{\86\102}% 0642;afii57442;ARABIC LETTER QAF
14474 \DeclareTextCommand{\kaf}{PU}{\86\103}% 0643;afii57443;ARABIC LETTER KAF
14475 \DeclareTextCommand{\lam}{PU}{\86\104}% 0644;afii57444;ARABIC LETTER LAM
14476 \DeclareTextCommand{\meem}{PU}{\86\105}% 0645;afii57445;ARABIC LETTER MEEM
14477 \DeclareTextCommand{\nun}{PU}{\86\106}% 0646;afii57446;ARABIC LETTER NOON
14478 \DeclareTextCommand{\ha}{PU}{\86\107}% 0647;afii57470;ARABIC LETTER HEH
14479 \DeclareTextCommand{\waw}{PU}{\86\110}% 0648;afii57448;ARABIC LETTER WAW
14480 \DeclareTextCommand{\alefmaqsura}{PU}{\86\111}% 0649;afii57449;ARABIC LETTER ALEF MAKURA
14481 \DeclareTextCommand{\ya}{PU}{\86\112}% 064A;afii57450;ARABIC LETTER YEH
14482 \DeclareTextCommand{\nasb}{PU}{\86\113}% 064B;afii57451;ARABIC FATHATAN
14483 \DeclareTextCommand{\raff}{PU}{\86\114}% 064C;afii57452;ARABIC DAMMATAN

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14484 \DeclareTextCommand{\jarr}{PU}{\86\115}% 064D;afii57453;ARABIC KASRATAN
14485 \DeclareTextCommand{\fatha}{PU}{\86\116}% 064E;afii57454;ARABIC FATHA
14486 \DeclareTextCommand{\damma}{PU}{\86\117}% 064F;afii57455;ARABIC DAMMA
14487 \DeclareTextCommand{\kasra}{PU}{\86\120}% 0650;afii57456;ARABIC KASRA
14488 \DeclareTextCommand{\shadda}{PU}{\86\121}% 0651;afii57457;ARABIC SHADDA
14489 \DeclareTextCommand{\sukun}{PU}{\86\122}% 0652;afii57458;ARABIC SUKUN

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Farsi

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14490 \DeclareTextCommand{\peh}{PU}{\86\176}% 067E;afii57506;ARABIC LETTER PEH
14491 \DeclareTextCommand{\tcheh}{PU}{\86\206}% 0686;afii57507;ARABIC LETTER TCHEH
14492 \DeclareTextCommand{\jeh}{PU}{\86\230}% 0698;afii57508;ARABIC LETTER JEH
14493 \DeclareTextCommand{\farsikaf}{PU}{\86\251}% 06A9???;afii????;FARSI LETTER KAF
14494 \DeclareTextCommand{\gaf}{PU}{\86\257}% 06AF;afii57509;ARABIC LETTER GAF
14495 \DeclareTextCommand{\farsiya}{PU}{\86\314}% 06CC;afii????;FARSI LETTER YEH

14496 \DeclareTextCommand{\ZWNJ}{PU}{\9040\014}% 200C;ZWNJ%
14497 \DeclareTextCommand{\noboundary}{PU}{\86\325}% 200D;ZWJ

14498 \puarenc

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51 End of file hycheck.tex

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14499 \*check
14500 \typeout{}
14501 \begin{document}
14502 \end{document}
14503 \check

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